From: Sexauer, Edward J - MSHA
Sent: Tuesday, October 14, 2003 8:30 AM
To:
Subject: FW: Comments on m/nm dpm proposed rule, RIN 1219-AB29


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Response to Inquiry

-----Original Message-----
From: Peter Galvin [mailto:pd.galvin@verizon.net]
Sent: Monday, October 13, 2003 8:38 PM
To: comments@msha.gov
Subject: Comments on m/nm dpm proposed rule, RIN 1219-AB29

Attached in the form of a Microsoft Word document please find my comments on thd August 14, 2003 proposed rule by MSHA to amend 30 CFR Part 57.

I have also separately attached items referenced in the comments as "enclosures".

Please acknowledge receipt of these comments promptly by return e-mail. Thank you.

MSHA Docket
No. AB29-COMM-27

Docket ID Number [RIN 1219-AB29]

October 10, 2003

Marvin W. Nichols, Jr., Director
Office of Standards, Regulations, and Variances
Mine Safety and Health Administration
1100 Wilson Blvd., Room 2313
Arlington, Virginia 22209-3939

Dear Mr. Nichols:

This is in response to MSHA's request on August 14, 2003 for comments on a proposal to amend the agency's rule to protect underground metal and nonmetal workers from the hazards associated with exposure to diesel particulate matter (dpm). These comments support and supplement my oral remarks at an MSHA's hearing in Washington, D.C. on this rulemaking on October 7, 2003.

I am submitting these comments, as an expert both in administrative law (rulemaking procedures) and on the substance of this particular rulemaking. My expertise in the former comes from over 15 years as Co-Counsel for Administrative Law for the Solicitor of Labor, advising all parts of the Department on rulemaking issues, and for which I received numerous commendations. My expertise in the latter comes from my detail to MSHA for several years for the specific purpose of facilitating the dpm rulemaking (as well as noise). I worked closely with the entire committee on all aspects of the rulemaking, from health impacts, to technology, to costing. I returned to other duties in the Office of the Solicitor, however, before the final rule was published, and retired from the Federal government in May of this year.

I have confirmed with the Counsel for Ethics in the Department that I am permitted to submit comments in this rulemaking either on behalf of myself or on behalf of others, and to represent myself and/or others in any litigation that should ensure. I am enclosing a copy of their approval for the record.

My comments at this time are on behalf of myself only, and have been prepared without compensation of any sort. This could change as the process continues, and consultations are ongoing among the Steelworkers, the Mine Workers, health experts, administrative law experts and others interested in this rulemaking and MSHA's implementation of the rule. Given my background, I will be raising factual and legal questions about some of the proposals which others are bound to support by prior commitment.

For your convenience, I have organized my written comments into four sections, numbered (A) through (D).

(A) This section includes general comments about the history and scope of this rulemaking. In particular, it emphasize my concern about this Administration's continued and knowing failure to enforce the current rule, as written, while this rulemaking is pending. I also remind the agency and the mining community why adopting a final rule is a very different action than issuing a proposal.

(B) This section reviews all the provisions the final metal and nonmetal dpm rule in sequential order, noting explicitly how the proposal would change them. For those provisions of the final rule which would be amended by the proposal, comments on the specific changes proposed are included.

(C) This section provides more extensive comment on some key issues, in no particular order:

1) Feasible interim and final limits on dpm. The data on mine dpm levels and controls gathered since the final rule went into effect require MSHA to lower the interim limit now and lower the final limit. Also, MSHA's proposal contains a number of changes that significantly impact how the final rule would be implemented; these changes cannot be made at this time because they require a determination about the feasibility of the final limit itself, a determination which the agency concedes it does not yet have the information to make.

2) Feasibility for individual mine operators - – required controls, exceptions, and extensions of time to comply. With very limited exceptions, the current rule requires operators to reduce dpm to the interim or final limit. The proposal would significantly broaden the potential circumstances under which mine operators would not have to do so, without any evidence these changes is required in order to make the rule feasible for the mining industry as a whole. These changes would have significant adverse effects on the miner health, and on the agency's ability to enforce the rule.

3) Feasible type of limit and types of compliance sampling. MSHA is proposing to change the interim concentration limit to a less protective interim personal exposure limit (PEL) without any evidence that the more protective approach is not feasible for the mining industry as a whole (and has stated its intent to propose a PEL to replace the final concentration limit. In a related action, the proposal would eliminate the authority of the agency to use area and occupational sampling in determining compliance with both the interim and the final limits, without any evidence that the more protective approach is not feasible for the mining industry.

4) Surrogate for compliance sampling. The proposal to change the surrogate used to measure dpm in underground metal and nonmetal mines, from total carbon to elemental carbon, is without foundation. The record does not support the agency's claim that the amount of elemental carbon is an accurate surrogate for the amounts of dpm that need to be measured under actual mining conditions. Moreover, the record does not support the agency's claim that there is no solution

to interference issues that arise when total carbon is used as the surrogate for dpm, a method otherwise acknowledged to provide an accurate method for determining the amounts of dpm that need to be measured under actual mining conditions. However, MSHA may wish to consider whether adopting the approach taken in the coal sector, which does not require dpm compliance sampling, would be feasible for the mining industry in certain situations and provide equivalent or better protection for miners.

5) Operator dpm control plans. The proposal would significantly limit the rule's requirement for individual mine control plans, both at the interim and final limits, reducing miner health protection without any evidence the current requirements are not feasible for the mining industry as a whole, and despite the industry's apparent success in implementing such plans already. In fact, the evidence warrants strengthening these requirements rather than loosening them.

It should be noted, however, that not every important issue covered under Heading B is included under Heading C – for example, comments on MSHA's single sample policy are only included under Heading B.

(D) This section covers several miscellaneous matters: MSHA's request for information about health effects; comments on the agency's analysis of costs and benefits in its Preliminary Regulatory Economic Analysis; and identification of certain material the agency needs to collect and consider.

I appreciate the agency's consideration of these comments.

Sincerely yours,

Peter D. Galvin
9633 Parkwood Drive
Bethesda, MD 20814

Enclosures

A) General comments on this rulemaking and the legal requirements for issuing a final rule

According to the Preliminary Regulatory Economic Analysis (PREA), there are only about 200 active underground metal and nonmetal mines, and only about 170 have diesel-powered equipment, with those not using diesel mostly very small mines. There are, however, about 18,000 workers in those 200 mines; and although the PREA is not specific on this point, it would appear a fair statement that there are more than 15,000 workers in those underground mines using diesel equipment. According to MSHA's risk assessment, as supplemented by exposure data collected since, many of these miners continue to be exposed to significant concentrations of diesel particulate matter, which are associated with a variety of adverse health consequences including lung cancer.

A rule limiting the exposure of metal and nonmetal underground mine workers to dpm was properly promulgated by MSHA in January 2001 -- more than a dozen years after the agency began considering a specific standard based on the recommendations of an advisory committee, and 9 years after it initiated rulemaking. Prior to issuing the final rule, the agency held workshops for the mining community, published a Toolbox of effective controls for dpm, developed and disseminated a computer spreadsheet tool to assist individual operators to select the most cost-effective controls for their mines, and took comments on the final rule for almost a full year.

To further facilitate implementation, the rule contained staggered effective dates, notwithstanding the agency's conclusion that "…the best available evidence indicates that a significant risk of adverse health effects due to dpm exposures will remain even after the rule is fully implemented …." (66 FR 5665), and indeed will leave miners exposed to concentrations of dpm well in excess of any other type of workers (see Table III-4, 66 FR 5571). In particular, the restriction on the concentration of dpm permitted in such mines was designed to go into effect in stages. The rule provided that no limit at all was to take effect for a full 18 months after the rule was issued to provide additional time for education and preparation by the mine community. Thereafter, an interim limit was to take effect for another 3 years and 6 months. The final limit was not to go into effect for a full 5 years.

Despite all of these efforts to accommodate this sector of the mining industry, the new administration at MSHA elected to further delay implementation of the interim concentration limit and other provisions of the rule several times. In fact, those delays continue today – according to the agency's final compliance guide issued on August 5, 2003, for example, the requirements of the rule for DPM control plans will not go into effect until the completion of this rulemaking. (Q & A 9) MSHA and the mining community have been on notice since November of 2002 that it is illegal to delay effective dates on its own initiative – the agency must go through and complete formal rulemaking to delay effective dates or otherwise alter the rule. (Center for Progressive Regulation, AB29-Comm-02.) Yet this course of conduct persists; and although I encouraged the Administration to seek the views of the Department of Justice on this matter prior to proceeding with any further delays, to my knowledge it did not do so

(Enclosure, letter of June 3, 2003, to Dr. John Graham, Director of Office of Information and Regulatory Affairs). This is not a matter of niceties; for as I point out in more detail below, there is a very big difference, and also a potentially long time gap, between a proposal and a final rule.

Moreover, MSHA's manner of enforcement is going beyond the terms of the settlement agreement to adopt the position of the mine operators in the litigation. As outlined in the settlement agreement: "The industry parties content that the interim standard….will necessitate the availability of agency-approved time extensions, based on individual mine conditions." However, this was not a position adopted in the settlement. Nevertheless, this is how MSHA is now enforcing the interim limit. According to the agency's final compliance guide, instead of requiring all mine operators to comply with the requirements to limit dpm concentrations to the interim limit, the agency is only requiring compliance to the extent "feasible" for the individual operator, a term it is defining with reference to criteria established under the noise standard which explicitly provides for such determinations (Q & A 11). While the settlement agreement called for MSHA to propose such changes to the dpm rule, and the agency is now doing so, it did not provide for MSHA to implement such criteria without rulemaking. MSHA is not authorized by law to implement though compliance policies actions that require rulemaking.

Instead of protecting miners, as required by the Mine Act, the agency has elected to go the extra mile to protect the pocketbook of every mine operator. Over the last year, instead of a citation for failure to protect miners, any operator who asked was given free, taxpayer-funded technical assistance – and more could take advantage of this under the new compliance guide. While many mine operators have no doubt reduced dpm concentrations following receipt of such assistance – assistance which followed years of pre-rule assistance by the agency, and 18 months of post-rule assistance -- that progress would have been made earlier had the rule gone into effect. MSHA's action only reinforces the tendency of mine operators to procrastinate complying with MSHA requirements. Moreover these delays have put the Federal government needlessly at risk of liability down the road as miners begin to understand the potential connections between various illnesses and their workplace exposures, notwithstanding the Department's long and intimate experience under the black lung program with the mining industry's efforts to shift its liabilities to the government. While the Environmental Protection Agency continues year after year to limit diesel engine emissions from new vehicles and to limit the exposure of the public to diesel emissions in the environment, MSHA, by contrast, is continuing to neglect its responsibilities to protect underground metal and nonmetal workers from much higher exposures.

With respect to the proposed rule itself, three general points need to be made.

First, the scope of the proposed changes indicates that they are not confined to changes which the agency agreed to propose as part of the settlement agreement. Many of the amendments being proposed by MSHA were not required to be proposed by the terms of the settlement agreement, nor are they minor technical corrections.

Second, although this rulemaking purports not to be changing the final limit and seeking information on its feasibility, this rulemaking in fact proposes a number of changes that in fact cannot be made without findings about the feasibility of the final limit -- e.g., the proposed changes to 30 CFR §57.5060(d) providing broader conditions under which an extension from the final limit.

Third, and most importantly, MSHA needs to remember that while it can **propose** any amendments it wants, the law does not permit it to **adopt** any amendments it wants (nor does the settlement agreement, quite properly, require it to do so). A rule cannot be promulgated by a settlement nor by collective bargaining agreement (and, indeed, very few of the workers impacted by this rulemaking are represented by a labor organization). In fact, even actions proposed as a result of negotiations through a properly established public advisory committee under the Negotiated Rulemaking Act (which was certainly not the case here) must meet the tests of the law before they can be adopted as a rule.

Rather, to promulgate a **final** rule, MSHA must have evidence in the record sufficient to meet the rulemaking requirements of the Administrative Procedures Act, and also sufficient to meet the specific tests set forth in the Mine Safety and Health Act. And whatever the status of the litigation on the initial rule, any amendments adopted by MSHA will be subject to a separate and independent rulemaking challenge by anyone who elects to bring such an action. Moreover under the Mine Safety and Health Act, the agency must consider whether evidence collected since the final rule was issued now establishes that it is feasible for a more protective rule.

At this point, the evidence for many of the proposals made by MSHA simply isn't adequate to defend a final rule that incorporates those proposals. While the parties to the settlement may have had concerns about the feasibility of some aspects of the rule at the time they reached the settlement agreement, the evidence gathered by the agency since the final dpm rule was promulgated further supports the decisions made in that rulemaking. Indeed, a fair reading of the evidence suggests that if anything, it is now feasible for the mining industry as a whole to do more to protect workers than is required by the current rule.

B. Section by section review.

This section reviews all the provisions the final metal and nonmetal dpm rule in sequential order, using their current section numbers.

Where specific proposals have been made by MSHA to change the current provisions, they are noted using strikeout for text being eliminated and boldface for proposed new text. Specific comments on those proposals are either provided in this heading, or reference is made to the heading in section C where the proposed amendments are discussed (in the context of an issue that may cut across several provisions). MSHA

should consider the comments under heading C in both contexts – i.e., as specific comments on the provisions noted, and as issue comments.

Interim concentration limit – 30 CFR §57.5060(a)

The interim concentration limit has officially been in effect since July 19, 2002, and since July 19, 2003, has been enforced in accordance with the instructions in MSHA's compliance guide of August 5, 2003.

MSHA is proposing to change the text of this requirement as follows:

> ~~(a) After July 19, 2002 and until January 19, 2006, any mine operator covered by this part must limit the concentration of diesel particulate matter to which miners are exposed in underground areas of a mine by restricting the average eight-hour equivalent full shift airborne concentration of total carbon, where miners normally work or travel, to 400 micrograms per cubic meter of air (400TC µg/m ^{3}).~~
>
> **(a) A miner's personal exposure to diesel particulate matter (DPM) in an underground mine shall not exceed an average either-hour equivalent full-shift airborne concentration of 308 micrograms of elemental carbon per cubic meter of air (308_{EC} µg/m ^{3}). [This interim permissible exposure limit (PEL) shall remain in effect until the final DPM exposure limit becomes effective.]**

In no particular order, the proposal would effectuate the following changes:

> * The expiration date of the interim limit would be amended so that it does not automatically expire in January, 2006. Comments on this point are provided under heading C-1, which also challenges MSHA's conclusion that it is infeasible to reduce the interim limit (or accelerate the implementation of the final limit).
>
> * The concentration limit would be changed to a personal exposure limit (PEL). Comments on this point are provided under heading C-3.
>
> * The interim limit would be changed from a specific amount of total carbon (TC) to a specific amount of elemental carbon (EC). Comments on this point are provided under heading C-4.

Final concentration limit - 30 CFR §57.5060(b)

This provision currently provides as follows:

> (b) After January 19, 2006, any mine operator covered by this part must limit the concentration of diesel particulate matter to which miners are exposed in underground areas of a mine by restricting the average eight-hour equivalent full shift airborne concentration of total carbon, where miners normally work or travel, to 160 micrograms per cubic meter of air (160TC µg/m ^{3}).

MSHA is not proposing any specific change at this time. However, the question of the final limit is very much a part of this rulemaking:

* Several of MSHA's other proposals would impact how the final limit is effectuated, and the analysis of their feasibility is tied to that of this provision. Accordingly, those amendments should not be made at this time. This point is further discussed under heading C-1.

* MSHA has specifically asked for advance comment on whether there is a need to change this requirement. Comments on the feasibility of lowering the final limit or putting it into effect earlier are also discussed under heading C-1.

Extensions of time to comply with limits - 30 CFR §57.5060(c)

MSHA is proposing extensive changes to the requirements of this section, as follows:

(c)(1) ~~If, as a result of technological constraints, a mine requires additional time to come into compliance with the limit specified in paragraph (b) of this section,~~ **If a mine requires additional time to come into compliance with the applicable limits established in paragraphs (a) and (b) of this section due to technological or economic constraints,** the operator of the mine may file an application with the ~~Secretary~~ **district manager** for a special extension.

~~(2) No mine may be granted more than one special extension, nor may the time otherwise available under this section to a mine to comply with the limit specified in paragraph (b) be extended by more than two years.~~

~~(3) The application for a special extension may be approved, and the additional time authorized, only if the application includes information adequate for the Secretary to ascertain:~~

~~(i) That diesel-powered equipment was used in the mine prior to October 29, 1998;~~

~~(ii) That there is no combination of controls that can, due to technological constraints, bring the mine into full compliance with the limit specified in paragraph (b) within the time otherwise specified in this section;~~

~~(iii) The lowest achievable concentration of diesel particulate, as demonstrated by data collected under conditions that are representative of mine conditions using the method specified in §57.5061; and~~

~~(iv) The actions the operator will take during the duration of the extension to:~~

~~(A) Maintain the lowest concentration of diesel particulate; and~~

~~(B) Minimize the exposure of miners to diesel particulate.~~

~~(4) The Secretary may approve an application for a special extension only if:~~

~~(i) The mine operator files, the application at least 180 days prior to the date the mine must be in full compliance with the limit established by paragraph (b) of this section; and~~

~~(ii) The application certifies that the operator has posted one copy of the application, at the mine site for 30 days prior to the date of application, and has provided another copy to the authorized representative of miners.~~

(2) The mine operator must certify on the application that the operator has posted one copy of the application at the mine site for at least 30 days prior to the date of application, and has provided another copy to the authorized representative of miners.

(3) No approval of a special extension shall exceed a period of one year from the date of approval. Mine operators may file for additional special extensions provided each extension does not exceed a period of one year. An application must include the following information:

(i) A statement that diesel-powered equipment was used in the mine prior to October 29, 1998;

(ii) Documentation supporting that controls are technologically or economically infeasible at this time to reduce the miner's exposure to the DPM limit.

(iii) The most recent DPM monitoring results.

(iv) The actions the operator will take during the extension to minimize exposure of miners to DPM.

~~(5)~~ **(4)** A mine operator must comply with the terms of any approved application for a special extension, ~~and~~ post a copy of an approved application for a special extension at the mine site for the duration of the special extension period**, and provide a copy of the approved application to the authorized representative of miners**.

When an extension is granted under the current rule, an operator may use personal protective equipment to help minimize miner exposure. This is only one of two situations in which the current rule allows the use of PPE.

The current provision in the rule applies only to the final concentration limit, and hence is not scheduled to go into effect until January 2006.

The changes proposed by MSHA would significantly expand the conditions under which mine operators could seek extensions of time to comply, and hence use PPE.

* Unlike the current rule, extensions could be requested for compliance with the interim limit.

* Unlike the current rule, extensions under both the interim and final limits could be requested based on an individual mine operator's economic situation.

These proposed changes are discussed under heading C-2. In addition, because this proposal would amend the manner in which the final limit is to be implemented, the matter is discussed under heading C-1.

Exceptions to limits - 30 CFR §57.5060(d)
Restrictions on use of personal protective equipment to meet limits - 30 CFR §57.5060(e)

The issues covered by these two paragraphs in the current rule would be significantly revised and combined into a single paragraph (d) in the proposal that redefines what controls are required in order to comply with the limits in 57.5060(a) and (b):

~~(d)(1) Mine operators may permit miners engaged in inspection, maintenance, or repair activities, and only in such activities, with the advance approval of the Secretary under the circumstances and conditions defined in paragraphs (d)(2) through (d)(4) of this section, to work in concentrations of diesel particulate matter exceeding the applicable concentration limit under paragraph (a) or (b) of this section.~~

~~(2) The Secretary will only provide advance approval:~~

~~(i) For inspection, maintenance or repair activities to be conducted:~~

~~(A) In areas where miners work or travel infrequently or for brief periods of time;~~

~~(B) In areas where miners otherwise work exclusively inside of enclosed and environmentally controlled cabs, booths and similar structures with filtered breathing air; or~~

~~(C) In shafts, inclines, slopes, adits, tunnels and similar workings that the operator designates as return or exhaust air courses and that miners use for access into the mine or egress from the mine;~~

~~(ii) When the Secretary determines that it is not feasible to reduce the concentration of dpm in the areas where the inspection, maintenance or repair activities are to be conducted to those otherwise applicable under paragraph (a) or (b) of this section; and~~

~~(iii) When the Secretary determines that the mine operator will employ adequate safeguards to minimize the dpm exposure of the miners.~~

~~(3) The Secretary's determinations under paragraph (d)(2) of this section will be based on evaluating a plan prepared and submitted by the operator no less than 60 days before the commencement of any inspection, maintenance or repair activities. The mine operator must certify in the plan that one copy of the application has been posted at the mine site for 30 days prior to the date of submission, and another copy has been provided to the authorized representative of miners. The plan must identify, at a minimum, the types of anticipated inspection, maintenance, and repair activities that must be performed for which engineering controls sufficient to comply with the concentration limit are not feasible, the locations where such activities could take place, the concentration of dpm in these locations, the reasons why engineering controls are not feasible, the anticipated frequency and duration of such activities, the anticipated number of miners involved in such activities, and the safeguards that the operator will employ to limit miner exposure to dpm, including, but not limited to the use of respiratory protective equipment. The approved plan must include a program for selection, maintenance, training, fitting, supervision, cleaning and use of personal protective equipment and must meet the minimum requirements established in §57.5005 (a) and (b).~~

~~(4) An advance approval by the Secretary for employees to engage in inspection, maintenance, or repair activities will be valid for no more than one year. A mine operator must comply with the conditions of the approved plan [which was the basis of the approval], and must post a copy of the approved plan at the mine site for the duration of its applicability.~~

~~(e) Other than pursuant to the conditions required in paragraphs (c) or (d) of this section, an operator must not utilize personal protective equipment to comply with the requirements of either paragraph (a) or paragraph (b) of this section.~~

(d) The mine operator shall install, use, and maintain feasible engineering and administrative controls to reduce a miner's exposure to or below the DPM limit established

in this section. When controls do not reduce a miner's DPM exposure to the limit, controls are infeasible, or controls do not produce significant reductions in DPM exposures, controls shall be used to reduce the miner's exposure to as low a level as feasible and shall be supplemented with respiratory protection in accordance with §57.5005(a), (b), and paragraphs (d)(1) and (d)(2) of this section.

(1) Air purifying respirators shall be equipped with the following:

(i) Filters certified by NIOSH under 30 CFR part 11 (appearing in the July 1, 1994 edition of 30 CFR, parts 1 to 199) as a high efficiency particulate air (HEPA) filter;

(ii) Filters certified by NIOSH under 42 CFR part 84 as 99.97% efficient; or

(iii) Filters certified by NIOSH for diesel particulate matter.

(2) Nonpowered, negative-pressure, air purifying, particulate-filter respirators shall use an R- or P-series filter or any filter certified by NIOSH for diesel particulate matter. An R-series filter shall not be used for longer than one work shift.

Under current §§57.5060 (a) and (b), mine operators must reduce dpm to the applicable limit (interim or final), in all areas of a mine where miners may be exposed to dpm, regardless of the technological or economic difficulties this may pose for an individual operator. The provisions in subsection (d) of the current rule provide operators the opportunity to request approval for a limited exemption from the requirement to bring dpm concentrations down to the limit for certain inspection, maintenance and repair activities of a temporary nature. The provision also requires the use of personal protective equipment in such situations, and is one of only two situations in which the current rule allows the use of dpm. Exemptions are limited to one year, but may be renewed. Under the current rule, the PPE authorized for use during the duration of an exemption must be part of an MSHA-approved operator plan that includes a program for selection, maintenance, training, fitting, supervision, cleaning and use of personal protective equipment and must meet the minimum requirements established in §57.5005 (a) and (b).

Under the proposal, unlike the current rule:

* only engineering controls and administrative controls (i.e., work-practice controls, but not miner rotation) that are economically and technologically feasible for that particular operator must be utilized by an operator;

* moreover, only controls that that produce significant reductions in dpm exposures must be utilized by an operator;

* the aforementioned two restrictions on the types of controls that must be used would be true for all areas of the mine, not just those in which miners may have to temporarily work for inspection, maintenance or repair activities;

* the proposal would not require operators to seek advance approval from MSHA for an "exemption" to make a determination that controls are not feasible or do

not produce significant reductions in dpm exposures, nor seek advance approval to use PPE

* the proposal would not establish a one-year limit without reapproval by MSHA on limiting controls to those the operator determines are feasible and produce significant reductions in dpm exposures, nor a one-year limit without reapproval by MSHA on using PPE;

* operators would not be required to have a specific plan for the use of PPE, but would be free to use PPE as long as it meets the specific requirements in §57.5005 (a) and (b) – as well as with the two new additional requirements concerning filters that are set forth in the proposal.

Comments on the proposed amendments are contained under heading C-2.

The provisions of the current rule requiring the use of controls to limit dpm to the applicable limit, and the exemption thereto, were by the terms of the rule to go into effect at the same time as the limits. According to the compliance guide, however, these requirements have been stayed, and instead MSHA is implementing an approach akin to that of the proposed rule. MSHA's failure to put this and other requirements of the rule into effect as required by the rule is discussed under heading A.

Restrictions on use of "administrative controls" to meet limits - 30 CFR §57.5060(f)

MSHA has proposed the following change:

~~(f) An operator must not utilize administrative controls to comply with the requirements of this section.~~

(e) Rotation of miners shall not be considered an acceptable administrative control used for compliance with this section.

According to the compliance guide, the current provision has been stayed pending adoption of these amendments (Q and A 9); however, the compliance guide also states that rotation of miners is not permitted (Q & A 20).

It would appear that this change is nothing more than a restatement of the existing rule. According to the preamble to the final rule, operators could reduce the concentration of dpm to the interim or final limit by any combination of engineering or "work practice" controls. (See 66 FR 5859). As further explained in that preamble, rotation of workers would not be an acceptable way to reduce concentrations. Rotation reduces individual exposures, but not concentrations; moreover, it spreads the significant risk of serious harm from dpm exposure to more miners. (See 66 FR 5862)

The preamble to this proposal indicates that this is some confusion about the term "administrative controls" and that many of the "work practice controls" permitted under the current rule might be interpreted by some as falling under that term. (See 68 FR 48713) This is odd, since the terminology was derived from the widely praised and

circulated diesel Toobox. Moreover, its proposed rule, the agency asked the mining community whether the term "administrative controls" should be defined to avoid any confusion about this intent, but received no comment on the matter. (66 FR 6862).

Nevertheless, the proposed change does not change the intent of the original provision. Whether or not the agency adopts a concentration limit or an exposure limit, rotation of workers is not an acceptable practice when a carcinogen is involved because it spreads the significant risk of harm from dpm exposures to more miners.

Single sample compliance determinations – 30 CFR §57.5061(a)

According to the agency, the proposed rule would, with some word changes, retain the specific requirement in the current rule that: "A single sample collected and analyzed by the Secretary in accordance with the requirements of this section shall be an adequate basis for a determination of noncompliance with an applicable limit on the concentration of diesel particulate matter pursuant to Sec. 57.5060." In fact, the proposed amendments appear to undermine this important requirement.

The question of whether a single sample would be an adequate basis for a compliance determination in this situation was thoroughly considered during the prior rulemaking. There is an extensive discussion of the agency's rationale for adopting this approach in the preamble to the final rule (see 66 FR 5864-5866), and a full explanation of why it would not be appropriate under the law to adopt some type of an averaging method. While some industry representatives assert that they fail to obtain the same results as MSHA in side-by-side sampling, such assertions does not undercut the rationale which MSHA set forth for its single sample approach, and the agency should not alter this policy.

With regard to citation sampling, the agency has assured the mining community that before issuing a citation, it would apply a margin of error to each sampling result in order to account for normal variability in the sampling and analytical process, and that it would consult with the mining community in ensuring that the margin of error adopted would achieve a 95-percent confidence level. At the time the rule was issued, the agency anticipated that the sampling and analytical error factor would be between 1.1 and 1.2, but promised to be governed by actual data collected under mining conditions. While not required to do so, the agency further committed to ensuring the mining community would be fully informed of its analysis well before the compliance limit went into effect. (See Q and A 17) The agency did in fact follow up as it promised, and the analysis has been posted its on MSHA's web site for some time, and incorporated into the compliance guide. (The error factor applied when TC is measured as EC plus OC is 1.14, and the error factor applied when TC is calculated as EC times 1.3 is 1.12.)

> * Note: As cogently pointed out by the United Mine Workers and the USWA, use of an error factor effectively raises a miner's risk of disease beyond the limit established as feasible by the agency, and is an agency practice that warrants further scrutiny. The USWA points out that most rules which use an effort factor

> also include an action level (MSHA's noise rule, for example, includes an action level). Accordingly, the agency needs to more clearly justify its rationale for applying an error factor in this situation (whatever that factor may turn out to be from time to time based on continuing experience).

Despite the agency's statement that it is not intending to change the single-sample requirement, the word changes of the proposed revision appears to do so in two respects. In markup form, the revised provision would read:

> "**MSHA shall use a** ~~A~~ single sample collected and analyzed by the Secretary in accordance with the requirements of this section ~~shall be~~ **is** an adequate basis for a determination of noncompliance ~~with an applicable limit on the concentration of diesel particulate matter pursuant to Sec. 57.5060~~ **with the PEL**.

First, the current language clearly states the consequences of using a single sample as a legal matter -- the sample shall be an adequate basis for a citation -- whereas the proposed revision states it as an approach by MSHA. This seems to leave it open for the Mine Safety and Health Review Commission to adopt its own view of whether a single sample is adequate. The existing language was designed to be unambiguous.

Second, the single sample requirement in the existing standard refers to the applicable limit – i.e., to both the interim and final limits. The proposed language change refers only to a "PEL". Since there is no "final PEL" in the rule (nor even proposed), this allows some to argue that the single sample requirement applies only to the interim limit, not the final limit.

Accordingly, to be consistent with its stated intent, the agency should not adopt the proposed amendments. If the agency wants to propose changing the current single sample requirement, then it needs to give clean and unambiguous notice of that intent. If the agency determines it has the evidence at this time to warrant changing the interim concentration limit to an interim PEL (see the extensive comments on this point under heading B-1), it may want to strike the words "on the concentration" to avoid confusion; however, this should be the limit of any amendment to this section absent separate notice.

Sampler and analytical method - 30 CFR §57.5061(b)

The current rule requires that a specific type of sampler and specific type of analysis be utilized by MSHA in making compliance determinations, as follows:

> "The Secretary will collect samples of diesel particulate matter by using a respirable dust sampler equipped with a submicrometer impactor and analyze the samples for the amount of total carbon using the method described in NIOSH Analytical Method 5040, except that the Secretary may also use any methods of collection and analysis subsequently determined by NIOSH to provide equal or improve accuracy for the measurement of diesel particulate matter…."

The proposed rule would not alter these requirements, except to replace the words "total carbon" with "elemental carbon". Accordingly, the change would apply in measuring compliance with either the interim limit or the final limit.

A detailed comment on the proposed change in surrogate is located under heading C-4. For the reasons stated therein, I am recommending a substitute for the proposal in this respect, and one explicitly limited to the interim final rule.

That MSHA has determined not to propose any other amendment of this provision reflects the record not only prior to the final rule but the additional record developed since the rule was promulgated. As part of the settlement agreement, MSHA agreed to study the sampling method and in particular the performance characteristics of the SKC sampler. MSHA also agreed to work with NIOSH to make sure the performance characteristics of the SKC sampler are satisfactory. As the agency notes in the preamble to the proposed rule, it did undertake these actions, and has determined the method is sound for compliance purposes. For example, the agency's discussion of the 31 mine study notes that :

> "The submicron impactor removes 94% of the mineral dust from DPM samples. Remaining carbonate interference, if any, is removed by subtracting the 4^{th} organic peak from the analysis. For typical gold mine samples, the interference from elemental carbon (graphite) would be less than 1.5 $\mu g/m^3$. The use of the impactor also eliminates the need to acidify samples, including samples from trona mines. For typical non-acidified trona mine samples, the interference from bicarbonate would be less than 0.5 $\mu g/m^3$. Overload of particulate matter on the impactor substrate to the filter was not observed…..Intra- and inter-laboratory analytical imprecision appear to be in line with other airborne contaminants monitored by MSHA and other regulatory agencies. ….The supplier has satisfactorily addressed concerns over possible manufacturing defects in the specialized SKC DPM sampling cassette." (68 FR 48670-71)

NIOSH also has noted that all technical questions raised about the sampler and analysis have been resolved. (John Howard, 6/25/03 letter in the record) It is important to note that the agency determined that the type of sampler used to collect compliance samples, and the analytical procedure specified in the rule, are accurate for compliance determinations based upon the amount of total carbon, the amount of elemental carbon, or both. At present, in fact, MSHA is currently utilizing both surrogates measured using the same sample filter analyzed by the same procedures (see Compliance Guide, Q and A # 16).

Sampling strategy - 30 CFR §57.5061(c)

The proposal would eliminate MSHA's authority to use occupational and/or area sampling at its discretion. Extensive comments on this point are included in heading C-3.

Although the compliance guide does not explicitly state that the current rule's provision is stayed, it does state the equivalent by specifying that MSHA will only use personal sampling in its current enforcement approach. (Compliance Guide, Q and A #16). As indicated in the discussion in heading C-3, there is a way to deal with continuing questions about these methods, and MSHA could have adopted this approach rather than illegal suspend this requirement pending completion of the rulemaking.

Diesel particulate matter control plan – 30 CFR §57.5062

MSHA has proposed the following change to this section:

~~(a) In the event of a violation by the operator of an underground metal or nonmetal mine of the applicable concentration limit established by §57.5060, the operator, in accordance with the requirements of this section, must –~~

~~(1) Establish a diesel particulate matter control plan for the mine if one is not already in effect, or modify the existing diesel particulate matter control plan, and~~

~~(2) Demonstrate that the new or modified diesel particulate matter control plan controls the concentration of diesel particulate matter to the applicable concentration limit specified in §57.5060.~~

~~(b) A diesel particulate control plan must describe the controls the operator will utilize to maintain the concentration of diesel particulate matter to the applicable limit specified by §57.5060. The plan also must include a list of diesel-powered units maintained by the mine operator, information about any unit's emission control device, and the parameters of any other methods used to control the concentration of diesel particulate matter. The operator may consolidate the plan with the ventilation plan required by §57.8520. The operator must retain a copy of the current diesel particulate matter control plan at the mine site during its duration and for one year thereafter.~~

~~(c) An operator must demonstrate plan effectiveness by monitoring, using the measurement method specified by §57.5061(b), sufficient to verify that the plan will control the concentration of diesel particulate matter to the applicable limit under conditions that can be reasonably anticipated in the mine. The operator must retain a copy of each verification sample result at the mine site for five years. The operator monitoring must be in addition to, and not in lieu of, any sampling by the Secretary pursuant to §57.5061.~~

~~(d) The records required by paragraphs (b) and (c) of this section must be available for review upon request by the authorized representative of the Secretary, the authorized representative of the Secretary of Health and Human Services, or the authorized representative of miners. In addition, upon request by the District Manager or the authorized representative of miners, the operator must provide a copy of any records required to be maintained pursuant to paragraph (b) or (c) of this section.~~

~~(e)~~

~~(1) A control plan established as a result of this section must remain in effect for 3 years from the date of the violation which caused it to be established, except as provided in paragraph (e)(3) of this section.~~

~~(2) A modified control plan established as a result of this section must remain in effect for 3 years from the date of the violation which caused the plan to be modified, except as provided in paragraph (e)(3) of this section.~~

~~(3) An operator must modify a diesel particulate matter control plan during its duration as required to reflect changes in mining equipment or circumstances. Upon request from the Secretary, an operator must demonstrate the effectiveness of the modified plan by monitoring, using the measurement method specified by §57.5061, sufficient to verify that the plan will control the concentration of diesel particulate matter to the applicable limit under conditions that can be reasonably anticipated in the mine.~~

~~(f) The Secretary will consider an operator's failure to comply with the provisions of the diesel particulate matter control plan in effect at a mine or to conduct required verification sampling to be a violation of this part without regard for the concentration of diesel particulate matter that may be present at any time.~~

(a) When it will take the operator more than 90 calendar days from the date of a citation for violation 57.5060 to achieve compliance, the operator shall establish and implement a written plan to control the miner's exposure. The plan shall remain in effect for a period of one year after the citation is terminated.

(b) The plan must include a description of the controls the operator will use to reduce the miner's exposure to the DPM limit.

(c) The operator must modify the plan to reflect changes in controls, mining equipment, or continuing noncompliance.

(d) The operator must retain a copy of the plan at the mine site for the duration of the plan.

Thus, the proposal would effectuate a number of changes:

* Instead of being required the create a dpm control plan upon violation, an operator will only need a control plan if abatement takes more than 90 days from the date of citation;

* The dpm control plan designed by the operator would not explicitly become the "law" of the mine, subject to citation by MSHA should its terms be violated (although the agency, in its preamble, explains it intends to administer the rule in this fashion nevertheless;

* The dpm control plan will be in effect for one year instead of three, and records would not have to be retained as long;

* The operator need not verify the effectiveness of the dpm control plan through sampling;

* The dpm control plan need not include certain information currently required; and

* The Secretary of HHS and the authorized representative of miners are not given explicit access to the control plan.

Extensive comments on these proposed changes are the subject of heading C-5.

According to the compliance guide, the provisions of this section, which were scheduled to go into effect at the same time as the interim limit more than a year ago, are still stayed. (Compliance Guide, Q and A #9.) As explained under heading A, MSHA's action in this regard is illegal.

Fueling practices – 30 CFR §57.5065

The final rule required diesel fuel used underground to have a sulfur content of 0.05% or less, and restricted the use of additives to those approved by EPA. (The final rule did not include a proposed restriction on idling underground; a technical correction was required to effectuate this intent.) These requirements, which brought the underground metal and nonmetal sector into conformity with requirements already in effect for underground coal mines, have been in effect now for more than a year.

The agency needs to review this requirement to determine if more protective fueling requirements have now become feasible. For further information on this point, see the discussion on fuel requirements under Heading C-1.

Maintenance standards – 30 CFR §57.5066

Like using low-sulfur fuel, good maintenance of diesel engines and aftertreatment equipment is a cost-effective way to limit dpm emissions. The more it is feasible to do in this regard, the easier and more cost effective it will be for operators to reduce dpm to required levels.

The final rule imposed a series of requirements in this regard which, after some definitional clarifications, went into effect more than a year ago: the standards to be maintained in paragraph (a); authority for equipment operators to tag equipment requiring maintenance in paragraph (b)(1); requirements for prompt examination of tagged equipment in paragraph (b)(2); requirements for logging information about the tagging and responsive actions in paragraph (b)(3); and requirements on the qualifications of those performing maintenance on diesel equipment in paragraph (c).

As indicated under Heading C-1, it appears implementation of this provision may have had an important impact on lowering baseline dpm levels to bring them into compliance with the rule's interim limit even with no or limited application of other controls.

Engines – 30 CFR §57.5067

This section imposes certain basic requirements on engines introduced underground since July 5, 2001 – either they must be approved engines, or they must meet certain EPA standards set forth in a table in this section. Those standards have now been in effect for more than a year.

Regrettably, before they went into effect, these requirements were amended by MSHA to permit operators to transfer non-compliant engines from the inventory of one

underground mine to another. Such a change was done without any evidence that it was necessary to make the rule feasible for the mine industry as a whole, and reduced miner protection.

MSHA is not proposing any amendment of these requirements. However in light of the continuing effect of EPA requirements on reducing the emissions of new engines, it may be feasible in the future for the industry to comply with tighter requirements. Indeed, most operators purchasing new engines for their underground fleets are in all likelihood significantly exceeding these standards already, for the current requirements were designed to allow the introduction underground of almost any engine that is not an ancient "clunker". In fact, as pointed out in heading C-1, it appears that such turnovers may have been a significant factor in reducing dpm concentrations prior to the implementation of the interim limit, as demonstrated by the baseline sampling results. Such operators, of course, have elected to use new engines to control emissions to required levels rather than to use filters or ventilation or other controls. However, MSHA should ensure that the minimum standards which each underground engine has to meet are regularly reconsidered to maximize miner protection.

Miner training – 30 CFR §57.5070

The final rule required annual training to miners who can expected to be exposed to dpm. The rule established a few basic requirements for the training, but left it up to operators and MSHA to determine whether individual operators could fit this training into their existing Part 48 sessions or whether separate sessions would be required.

These requirements have now been in effect for more than a year, and MSHA is not proposing any change at this time.

Environmental monitoring – 30 CFR 57.5071

This section of the final rule, which MSHA began enforcing at the same time as the interim limit, contains requirements that operators monitor the compliance with the dpm limits and take prompt action to correct problems they detect.

The proposal would alter the title and requirements of the section to change the monitoring requirement from one monitoring environmental conditions in the mine to one of monitoring employee exposures.

According to the preamble, the reason for the change is to make this section consistent with amendments to 30 CFR §57.5060 which change the concentration limit to an exposure limit. However, the proposed changes to this section would apply to both the interim limit (which is being changed to a PEL under this proposal) and the final limit (which is not being amended by this proposal). Comments on those provisions of this proposal which inappropriately impact the final limit are summarized under heading C-1.

Among other effects, the amendments eliminate the requirement that operators must monitor certain locations or positions designated by MSHA. As pointed out in the preamble to the final rule, "this requirement ensures special attention will be focused on locations or persons known to MSHA have a significant potential for overexposure to dpm." (66 FR 5882). Detailed comments on the significance of the change from a concentration limit to a PEL are discussed under heading C-3.

These changes would not alter the flexibility in the final rule on what measuring methods operators could use to "effectively determine" whether a mine is in compliance with the appropriate limit. However, the final rule did require mine operators operating under a control plan to use the same method as MSHA in measuring compliance (i.e., the method specified in 30 CFR §57.5061(b)), a requirement that would eliminated under the proposal. Now that the mining industry is much more familiar with the sample methodology and costs, MSHA should reconsider this matter. It may ultimately avoid much cost and confusion if operators and miners have the same type of information about mining conditions from operator monitoring as that which will be used by MSHA in making compliance determinations. Separate notice and opportunity for comment may be appropriate before action is taken in that regard.

Other requirements of this key protective section of the final rule are not being proposed for amendment. For example, the rule will continue to require that if operator monitoring indicates the limit has been exceeded, "the operator must promptly post notice of the corrective action being taken, initiate corrective action by the next work shift, and promptly complete corrective action." The rationale for this requirement is set forth in some detail in the preamble to the final rule. (66 FR 5883). In addition, the amendments do not alter the requirements for observation of monitoring by affected miners and their representatives. (Id.)

Diesel particulate records – 30 CFR §57.5075

MSHA is proposing several changes to this table to ensure they comport with other elements of this proposal.

There are, however, two technical changes that require review. The current table indicates that approved applications for an extention of time under 30 CFR 5060(c) to comply with the final concentration limit is "1 year beyond duration of extension." This does not appear to have been MSHA's original intent (66 FR 5861) but the matter should be clarified. Also, the table now contains a new reference to 30 CFR 57.5071(c), which requires corrective action by operators based on their own monitoring. However the retention time specified is "until the citation is terminated", an action not related to the referenced section. It would appear that the language intended was "until the correction has been completed."

It should be noted that the Compliance Guide contains language identical to that proposed, and accordingly any technical correction should be made there as well. As noted previously, the provisions of 30 CFR 5060(c) currently apply only to the final limit.

The fact that the discussion of recordkeeping requirements in the Compliance Guide confirms MSHA is authorizing extensions for the interim limit prior to completing rulemaking action is further evidence of MSHA's illegal conduct.

C) Comments on five key issues.

These comments are organized by topic, and hence may discussed proposed amendments to more than one paragraph or section of the rule.

1) Feasible interim and final limits on dpm.

This discussion summarizes two points about feasible limits:

a) The data on mine dpm levels and controls gathered since the final rule went into effect require MSHA to lower the interim limit now and the final limit as well.

b) MSHA's proposal contains several changes that relate to how the final rule would be implemented. These changes cannot be made at this time because they require a determination about the feasibility of the final limit itself, a determination which the agency concedes it does not yet have the information to make.

A related matter, the proposal to require MSHA to consider the feasibility for individual operators of complying with the interim and/or final limit, is discussed in detail under Heading C-2.

a) The data on mine dpm levels and controls gathered since the final rule went into effect require MSHA to lower the interim limit now, to transition to the final limit before 2006, and to lower the final limit as well.

In the preamble is the following statement: "MSHA has concluded that there is insufficient information available to support the feasibility of lowering the (interim) DPM limit at this time." (68 FR 48703). From the context, it appears the conclusion relates to technological infeasibility, but the agency is not clear in this regard. Moreover, the agency is proposing to change the interim limit so that it no longer necessarily expires in 2006, but will remain in effect until a date that is now uncertain (as a result of the agency's stated intention to open the final rule for review). The agency's conclusion, and its proposed change, are unsupported by the evidence in the record. In fact, the record is clear that the industry as a whole was able to come into compliance without significant investment, and has the control technology to readily reduce dpm now to below the

interim limit for a price that will not be infeasible for the industry as a whole. The same is true for the final limit (about which the agency is seeking initial information).

i) Baseline.

In the first place, the agency has known for some time that it actually overestimated the average baseline dpm concentration in this sector when making its determination several years ago that the existing interim limit was feasible. (In the existing standard, the agency based its feasibility projections on an average DPM concentration level of over 800 $\mu g/m^3$. 68 FR 48695)

The first indication came from the results of the 31-mine study, conducted soon after the final rule went into effect. Despite the fact that the study was done in mines selected with industry input, and before the average sample was already in compliance with the interim limit. Even in metal mines the median sample was below the interim limit at that time. Moreover, the study took place before the mines began to implement maintenance and engine requirements in the standard, which MSHA notes are likely to have resulted in current exposures much lower than those measured during this study. (68 FR 48695)

The baseline studies are a further indicator. Started in October 2002, the purpose of these studies was to "assist mine operators in developing compliance strategies based on actual exposure levels" (68 FR 48671), and the studies were performed due to a provision in the settlement agreement which reads "Compliance assistance will be in the form of DPM baseline sampling". All of this sampling was personal sampling. The current analysis of the samples available covers only those taken through March 2003, and thus exclude more recent data which are likely to show further reductions as operators prepared to meet MSHA's July 2003 enforcement date.

The baseline studies showed that the average miner exposure was only 222 $\mu g/m^3$. While it would be nice to point out that this is only about a quarter of the 800$\mu g/m^3$ average which MSHA had originally determined could be feasibly controlled by the industry as a whole, caution must be taken because these were only personal samples, not environmental samples, and as pointed out under Heading C-3, there is a big difference between the two. Nevertheless, even with a concentration limit, much of the sampling performed by MSHA in this sector is likely to be personal sampling, and to that extent it is fair to say that the average exposure is well below the interim limit already. Among additional findings:

* less than 20% of samples of total samples were out of compliance no matter what analytical method was used

* by type of job, only one (engineer) had a median baseline over the interim limit (and this was only a single sample), and most had a median limit well below the interim limit

* by type of commodity, the percentage of baseline overexposures measured (using TC=EC x1.3) went from 22% in metal down to 0% in trona, comprising the 15.7% mean overall (Chart V-3). However, even in the metal group, the mean level of TC measured using this method was only 296 micrograms/cubic meter, and the median only 239, and were well below the limit using TC=EC +OC (Tables V-8 and V-9).

* on a mine by mine basis, it appears from Charts V-3 and V-4 that 120 of 171 mines samples (70%) had no overexposures at all, and most of the remaining mines had few overexposures.

ii) Technological feasibility.

MSHA had previously taken the position that it is technologically feasible for the industry to go to a lower interim limit and indeed to a lower final limit. 66 FR 5888. The agency now has information that it underestimated the efficiency of various controls in reducing dpm emissions when it issued the final rule, reinforcing the agency's original conclusion that it is technologically feasible for the industry as a whole to achieve a more protective interim and final limit.

It should be noted that MSHA's original conclusion was based on an analysis using the agency's estimator model (see the discussion in the 1998 proposed rule, 63 FR 59198). The industry has challenged any conclusions based on that model. It should be noted in this regard that MSHA relied on the Estimator examples primarily to explore whether a lower limit was feasible, not whether the existing limit was feasible. None of the new evidence referred to below requires reliance upon the Estimator.

Low emission engines. MSHA was originally concerned that it would take time for lower-emission engines to become available for mining uses. However, in the meetings NIOSH held with the mining industry in Cincinnati and Salt Lake in the Spring of 2003, it was noted that Caterpillar, Deutz, and Detroit Diesel are all now offering EPA Tier II diesel engines for mining use. Moreover, Schnakenberg's study confirms that even using MSHA only approved engines as required by the rule can reduce the average dpm levels in this sector to 90 micrograms per cubic meter if each is equipped with only an 80% efficient filter.

Hot gas filters. The efficiency and availability of ceramic filters (which MSHA repeatedly states in the preamble and PREA that it continues to believe will be the primary control used by operators who were out of compliance in the baseline studies) was underestimated in the final rule.

At that time, although the agency noted some VERT results suggesting some DPM removal efficiencies above 90%, the agency was generally presuming that such efficiencies could only be routinely achieved by the use of paper filtration (and the addition of a water scrubber or other device to cool the gas). In fact in the Estimator studies which it cited as support for the current rule, the agency assumed a removal

efficiency rate of only 65-80% (63 FR 58207). Moreover, the agency was concerned about the widespread availability of ceramic filters for all sizes and types of equipment. (See the extensive discussion of "hot gas filters" beginning on 66 FR 5740) And subsequently, the agency became concerned that some of these filters might not be suitable for use because of their emission of poisonous nitrous dioxide (NO_2).

Since the final rule was issued and the NO_2 problem uncovered, however, the agency has gathered a great deal of evidence that ceramic filter efficiencies and availability have significantly improved. MSHA has also concluded that only certain aftertreatment filters cause harmful emissions, that alternatives to these are widely available, and that the harmful emissions can in any event be controlled.

> * Efficiency. In the collaborative MSHA/Kennecott Greens Creek Mining Company study (68 FR 48680), in which ceramic filters were installed on a loader and associated haulage trucks operating in a production stope, even with some apparent visual cracking, the ceramic filters removed more than 90% of the dpm. Indeed, average engine DPM emissions were reduced by 96%. MSHA's filter efficiency list (July 2003 update, posted on the agency's web site), provides a lengthy list of both catalyzed and non-catalyzed filters achieving dpm reductions of 85% or more.
>
> * Availability – "MSHA has found that suitable DPFs for engines of the horsepowers used in underground metal and nonmetal mining equipment **are** commercially available." 68 FR 48698, emphasis added. The extended discussion which follows refutes particular concerns which have been expressed about engines at both ends of the normal spectrum (low-horsepower engines used in ancillary and support equipment, and high-horsepower engines used in production equipment). MSHA reiterates this point several times, e.g.:
>
> > "MSHA is not aware of any gaps in filter availability. As stated at the recent workshops, most filter vendors stated they have experience installing DPM filters on all horsepower size engines.
>
> * NO_2 problem – As indicated in Table VII-1, certain types of catalyzed filters regenerated passively can produce significant NO to NO_2 conversion, although MSHA notes it is not aware of any overexposures to NO_2 to date. The agency has published a list on these filters on its website, and provided a field bulletin (PIB 02-04) that ensures their safe use. In particular, mine operators using such systems were advised by MSHA to have ventilation systems capable of diluring any NO_2 to non-hazardous concentrations, and test for localized buildups. As the agency also points out, active regeneration systems cannot have this problem; and while passive regeneration systems can only work above certain exhaust temperatures, active regeneration systems can work at all exhaust temperatures. The agency further notes that it is fairly easy to use active regeneration systems, either by plugging in the equipment at the end of each shift or by simply having the equipment operator remove the DPF at the end of each shift and have the next operator replace it with a regenerated unit. 68 FR 48698 In the meetings NIOSH

> held with the mining industry in the Spring of 2003, it was also reported that filter manufacturers are working on minimizing any NO_2 production from their units by downsizing the amount of catalytic material. Accordingly, passive regeneration systems may well be available to replace active filtration systems following the initial life cycle of these systems, and for use in implementing the final limit, even in those mines which are currently avoiding them out of concern about their impact on NO_2 levels.

Notwithstanding all of this information, the comments to the ANPRM contain an odd statement from NIOSH:

> "Although on the market for more than a decade, DPF systems have been only sporadically deployed and tested on underground mining vehicles….However, this technology needs significant additional evaluation and some possible re-engineering for underground mining applications…DPF reliability and durability are major issues requiring additional research and engineering." Cited at 68 FR 48695.

Apparently, when it made these comments, NIOSH must not have been familiar with the extensive studies which have been performed by MSHA itself, in cooperation with individual mine operators, and since documented on the pages of the preamble of the proposed rule. As John Howard, Director of NIOSH's Pittsburgh lab, has more recently pointed out, commercial availability of reliable systems is not an issue; rather, the key is working out the details for selecting the best approach for each mine. (Letter of June 25, 2003).

As similarly pointed out by MSHA, many of the questions operators have had about this form of emission control have turned out to reflect lack of understanding about their proper installation, use and maintenance, rather than flaws in the devices themselves:

> " MSHA has found that most mine operators can successfully resolve their implementation issues if they make informed decisions regarding filter selection, retrofitting, engine and equipment deployment, operations and maintenance. The Agency recognizes that practical mine-worthy DPF systems for retrofitting most existing diesel powered equipment in underground metal and nonmetal mines are commercially available and are mine worthy…installation will require mine operators to work through technical and operational situations unique to their specific mining circumstances." 68 FR 48696

Mine operators themselves have recently expressed the same view (NIOSH meetings with the mine industry, Spring 2003.)

Accordingly, MSHA and NIOSH have provided comprehensive compliance assistance to the underground metal and nonmetal mining industry. In particular, in February 2003, MSHA and NIOSH posted on their web sites a comprehensive compliance assistance toll titled "A DPM Filter Selection Guide for Diesel Equipment in Underground Mines" that

provides the experience-based information which addresses many of these operator concerns. That guide, and the extended response in the preamble to several specific operator concerns that have been expressed in this regard over time -- regeneration both active and passive (including NO2 emissions in some passive regenerative models), service life, engine malfunction, detecting malfunctioning dpf devices -- should put to rest any concern about the technological capabilities and availability of dpf control devices.

This new information needs to be taken into consideration in determining whether lower interim and final limits are indeed technologically infeasible.

Ventilation. Although increasing ventilation has been recommended by MSHA as a control since the publication of the Toolbox, the agency has not devoted considerable attention to its use until recently, anticipating based upon cost that this would be among the most expensive solutions for mine operators to employ. Indeed, the discussion of ventilation in the preamble of the final rule is primarily directed at addressing the concerns of some commenters that increasing ventilation could lead to other safety and health problems, such as drying out roadways and increasing exposure to silica bearing dust. (66 FR 5859) However, based on MSHA's recent work providing individual operators with compliance assistance, it appears that a number of simple improvements to ventilation can reduce dpm in ways not anticipated at the time the rule was promulgated. In fact, MSHA now takes the position that:

> " …at many other mines, perhaps the majority of mines affected by this rule, ventilation improvements would be an attractive DPM control option, either implemented by themselves or in combination with other types of controls. 68 FR 48700

As one example, MSHA points to specific problems it has observed at high-back room-and-pillar stone mines, which could benefit greatly from upgrading main, booster, and/or auxiliary fans, along with the construction and maintenance of effective ventilation control structures. In fact, the impact can be so significant that the agency noted:

> "MSHA believes that such ventilation upgrades, along with the replacement of as few as one to three engines, may be sufficient for many stone mines to achieve compliance with the interim DPM limit." Id.

Of equal interest is MSHA's discussion of ventilation in deep multi-level metal mines, which the agency notes " there are typically few if any feasible upgrades to main ventilation system elements that these mines have not implemented already." Id. However based on its consultations with operators, MSHA has identified aspects of ventilation system operation at even these mines that can be improved, and that could, in combination with upstream controls, help reduce dpm in a number of situations.

This new information needs to be taken into consideration in determining whether a lower interim and final limit are indeed technologically infeasible.

Fuel requirements. Whether considered in the specific context of 57 CFR 5065 or more generally in terms of the impact they have on the economic feasibility of other controls, improvements in fuel requirements need to be considered.

As noted in the original rulemaking, the sulfur content of the fuel can have a significant impact on the particulate emissions and hence the need for (and feasibility of) other controls. Studies with ultra-low sulfur fuel have confirmed that this finding applies to a new generation of fuel. (notes on NIOSH meeting with industry in Cincinnati, February 27, 2003, page 3.) Accordingly, it is incumbent upon MSHA to bring the record up to date on the feasibility of obtaining ultra-low sulfur fuel in mining areas. Since the final rule went into effect, new rules have been adopted requiring its use throughout the European community. EPA requirements may be gradually making such fuel more available here. In the interim, MSHA's compliance guide should be amended to specifically discuss the availability and use of ultra-low sulfur fuel where it is available; and, if it has not already been done, the Estimator program should be adjusted to permit it to take use of such fuel into consideration in its calculations.

Moreover, the agency now knows more about biodiesel fuels and their impact on dpm. (Control technology studies at Carmeuse North America, Inc., Maysville Mine and Black River Mine, discussed starting at 68 FR 48680). The tests showed that these fuels can have a dramatic impact on dpm reduction; for example, 50% recycled vegetable oil led to a 50 percent reduction in DPM emissions and exposures. Reductions of 30-35 percent were demonstrated with several other biodiesel mixtures. If such biodiesel fuels are now available to a significant portion of the mining community, the agency must consider requiring their use in order to reduce miner exposures.

This information needs to be taken into consideration in determining whether a lower interim and final limits are indeed technologically infeasible.

Administrative (work practice) controls. As noted in its evaluation of the 31-mine study, MSHA recognizes that the implementation of maintenance and engine requirements in the standard are among the reasons why current exposures are likely to be much lower than those measured during that study. (68 FR 48695) The baseline studies, conducted during a time period when only these provisions of the rule were in place, suggest that such practices by themselves in fact was able to bring many mines into compliance with the interim limit.

This new information needs to be taken into consideration in determining whether lower interim and final limits are indeed technologically infeasible.

Other controls. As with ventilation, the agency didn't discuss the use of cabs very much in the preamble to the final rule. However, some of the studies discussed in the preamble of the proposed rule suggest that the method is of considerable interest to operators (e.g., the Martin Marietta Aggregates mine studies, 68 FR 48681), and can be very effective (e.g., 75% effective when after-filters were used in the Kennecott Greens Creek Mining Company study, 68 FR 48680).

Information on other controls needs to be fully considered in determining whether lower interim and final limits are indeed technologically infeasible.

iii) Economic feasibility.

The agency's explanation of the legal concept of economic feasibility is correct in pointing out that: a) cost considerations "should have a substantially less significant role: than technology; b) the statute is technology-forcing; and c) that demonstrating economic feasibility does not guarantee the continued viability of individual employers.

Moreover there are practical limits on what data the agency has to advance to establish a rule's economic feasibility:

> "To prove economic feasibility, the court 'probably cannot expect hard and precise estimates of costs' particularly where industry refuses to provide the Agency access to confidential data (American Textile Mfrs. Inst. v. Donovan, 452 U.S. 490, 528–29, 9 OSH Cases 1913 (1981)) or OSHA must predict the technology a firm will rely upon to comply." Rabinowitz, Occupational Safety & Health Law 2d Ed. (2002), Chapter 14 (BNA)

According to the preamble to the final rule, the agency originally estimated that the rule would cost the underground metal and nonmetal sector about $25 million a year, less than 1% of the industry's revenue. Each of its assumptions was carefully detailed, and summarized in the preamble (66 FR 5890). the only reason the agency did not promulgate a more protective final rule in 2001 (e.g., lower limit, shortening the phase-in time to reach the final limit) was because of concerns about economic feasibility. 66 FR 5888. The agency now has information suggesting it has overestimated the costs to industry of complying with the existing interim and final limits; accordingly, the agency needs to revisit its initial conclusion that a more protective approach is economically infeasible.

The agency has not attempted to evaluate this information and revisit its 2001 conclusion that a more protective rule was not economically feasible. The discussion on economic feasibility in the preamble is limited to a paragraph explaining why the proposed rule meets the statutory test that it be economically feasible for the industry as a whole (and a discussion on individual operator feasibility, discussed below under heading C-2); the discussion on economic feasibility in the PREA is limited to an even shorter paragraph which is limited to discussing the feasibility to the industry of spending $4,500 a year in total (the agency's estimate of the net additional cost of its proposal).

The first step in this process would be to update the PREA so it is based on the best possible assumptions. In a few cases, the agency has revised its assumptions to reflect updated information – for example, in a number of places the agency refers to the new

baseline studies in making assumptions. (For specific comments on whether such data is used properly, see the discussion of costs and benefits under Heading E-2.) In most cases, however, the agency has declined to do so, even though it concedes the need. For example, after indicating it would not use new assumptions in determining the costs of compliance with the proposed changes to 30 CFR 57.5060, the agency offers the following concession:

> "MSHA does recognize, however, that for various other reasons the compliance costs may be lower now than those estimated in the original economic analysis. First, the number of metal non-metal mines using diesel equipment has decreased from 196 in 1998 to 182 in 2001. Second, filters have become more efficient." (Two other points made by the agency, concerning cost reductions associated with specific provisions of the proposed rule, are not quoted here). PREA, pp.13-14.

The argument that the new PREA should only reflect changes in the proposal implies a determination that the original assumptions remain as valid as they were when the final rule was promulgated. While reevaluating the feasibility of existing rules can pose difficulties (e.g., in 10-year required regulatory reviews), it needs to be done here if the agency is to make a key rulemaking determination required under the law -- namely, whether it is still the case that a more protective rule is economically infeasible. MSHA properly revised its estimate of costs on the original proposed rule in response to industry questions about the validity of assumptions, some of which it determined were valid, and the agency should now look again in light of its experience to date.

The REA accompanying the final rule was very specific on the assumptions utilized in calculating costs. Following are just a few examples of major assumptions that need to be reconsidered in light of the information gathered by MSHA since the final rule, and a sense of the impact such reconsiderations may have. The examples focus on the costs of the interim limit, which the REA estimated to be about 3 times as high as the yearly costs of complying with the final limit – and hence, the major cost component in the original determinations about economic feasibility.

> * Equipment inventory. According to the PREA, the number of pieces of equipment have dropped by about 10% from those used in the REA estimates. See Table II-5 in each. The differences vary by engine size category. Such changes affect pricing for the industry as a whole of, for example, adding filters.
>
> * Baseline exposures. The estimates by MSHA of what investments operators would have to make to meet the interim and final limits were based on the assumptions by technical staff about how much reduction in dpm would be required in typical mining sections. As discussed earlier in this section, however, the compliance baseline measurements demonstrate that, among other things, the average baseline dpm concentration is lower than that upon which the agency based its estimates – only about 25% of the baseline MSHA assumed in its planning. Accordingly, the types and number of controls required was significantly overestimated.

* Filter inventory. Another indicator of the potential magnitude of the error is to look at the current inventory of aftertreatment devices. The agency assumed in 2001 that to meet the interim limit, an extensive number of pieces of equipment would have to be equipped with ceramic filters –

> For production equipment with engines of 150 hp or less, ceramic filters will be used on: 75 percent of machines (93 machines) in mines with over 500 employees, 75 percent of machines (263 machines) in mines with 20 to 500 employees, and 50 percent of machines (25 machines) in mines with fewer than 20 employees. On support equipment, ceramic filters will be used on: 50 percent of machines (241 machines) in mines with over 500 employees, 50 percent of machines (746 machines) in mines with 20 to 500 employees, and 25 percent of machines (68 machines) in mines with fewer than 20 employees. (REA, 2001, p.46)

This led to an estimate of a yearly cost of $13.5 million for the industry as a whole (Table IV-6; Table IV-3 actually shows $15 million). This is about 75% of the total cost estimate for the interim limit, and almost 60% of the total estimated cost of the final rule – the major component of the cost estimates and, hence, of the economic feasibility determinations. It appears from the information in the preamble that this may have been a significant overestimate; a new inventory of equipment in the less than 200 mines involved should readily resolve the question. If the use of filters to meet the interim limit was significantly overestimated, it will have significant implications for whether the industry as a whole can meet a lower limit at this time and/or a lower final limit. Other assumptions about filter cost estimates may, in retrospect, have turned out to be in error (e.g., regeneration approach), and need to be reconsidered in looking at the feasibility of lowering the interim and/or final limits.

In this regard, one operator (Stillwater) has asserted in writing that it would require 24 regeneration stations to comply. As the company admitted in its oral statement, it could simply exchange filters and have a single station. Also, exchanging filters extends their useful life, and this needs to be taken into account in estimating replacement costs.

* Ventilation. In estimating the costs of the final rule, this was the major cost component after filters. Moreover, while MSHA on the one hand thought that many mines would not elect to rely on ventilation changes to comply with the interim limit, it actually took a much more conservative view in its cost estimates. Specifically, to reach the interim limit, MSHA assumed for costing purposes that the following ventilation upgrades would have to be made:

> Half of the 45 mines requiring a new fan system (22 mines) will install it, including: 7 mines with 20 to 500 employees, and 15 mines with fewer than 20 employees. Half of the 79 additional mines requiring a new fan

> motor (39 mines) will install it, including: 1 mine with over 500 employees, 24 mines with 20 to 500 employees, and 14 mines with fewer than 20 employees. Half of the 63 mines requiring major ventilation upgrades (31 mines) will make them, including: 2 mines with over 500 employees, and 29 mines with 20 to 500 employees. (REA, 2001, p.49)

It appears from the information in the preamble that this may have been a significant overestimate. In fact, MSHA observed in its 31-mine study that:

> "The Estimator predicted that compliance with the interim and final concentration limits would be possible without requiring major ventilation installations (new main fan, repowering main fan, etc.) or requiring environmental cabs as a means of controlling DPM at any of the 31 mines….." (68 FR 48671)

A new inventory of equipment in the less than 200 mines involved should readily resolve the question of whether MSHA overestimated the need for major ventilation controls. Also, as noted above in connection with the review of technological feasibility, MSHA has learned that many operators might benefit from more minor changes in their ventilation systems, a fact that needs to be taken into consideration in cost estimates.

In this regard, the stone industry has asserted that the cost estimates of the original rule (and in turn, the determination that the rule is economically feasible) incorrectly reflect the preference of this sector to rely upon extensive and expensive ventilation changes and cabs prior to relying upon particulate filters. The agency is, of course, under no obligation to assume that this sector will continue to take this approach if other, less expensive controls are available to reach the same dpm level. The continued doubts expressed by some about the technological feasibility of filtration devices, for example, should not be considered as determinative of what the industry will in fact do, especially given all of the continuing efforts to increase familiarity with the application of filters to specific situations.

In addition to revisiting the assumptions in the REA, MSHA should also look at the findings of specific studies in reconsidering whether a more protective rule is really economically infeasible. Even the early 31-mine study hints that complying with this rule is not as expensive as initially estimated:

> "MSHA estimates that the 31 mines in the study would incur yearly costs equal to 0.12 percent of their annual revenues to comply with the interim concentration limit and additional yearly costs equal to 0.06 percent of their annual revenues to comply with the final concentration limit. To comply with both the interim and final concentration limits, the 31 mines would incur yearly costs equal to 0.18 percent of their annual revenues." 68 FR 48671

The specific examples used by MSHA as illustrative of why a lower limit would be economically infeasible also needs to be reconsidered in light of this new evidence. For example, MSHA stated that to reach a lower limit, "It would begin to be necessary to retrofit cabs on equipment that was not designed with cabs and/or did not have off-the-shelf parts…Additional ventilation improvements (e.g., new shafts) could easily run into the millions of dollars….Additional replacement of engines beyond the natural turnover included in the baselines could run as high as…" (66 FR 5888). In light of the points above, these assumptions now appear highly questionable.

In revising its analysis of economic feasibility, the agency should also give consideration to other alternatives. For example, in 2001, the agency also considered the feasibility of requiring certain types of equipment to utilize a filter with 80% efficiency, or requiring each piece of equipment to reach a tailpipe limit as in the coal mine sector.

In addition, the agency explored the idea of establishing an action level to bridge any gap that exists between risk and feasibility. (66 FR 5710-11). The idea is not new, and is in fact well recognized in occupational health protection and included in many standards; MSHA's noise rule provides one example. MSHA decided not to incorporate such an approach into the current rule because it decided that most of the actions it was considering having an action level trigger could feasibly be required of all operators without a trigger. (66 FR 5856, 5860) However, the idea deserves further comment and consideration in the context of reconsidering the feasibility of a more protective approach.

<u>b) MSHA's proposal contains several changes that relate to how the final rule would be implemented. These changes cannot be made at this time because they require a determination about the feasibility of the final limit itself, a determination which the agency concedes it does not yet have the information to make.</u>

Notwithstanding a number of statements in the preamble that the agency is only looking at implementation of the interim limit in this rulemaking, the proposal would in fact make a number of amendments that will significantly impact how the final limit is to be implemented –

* 57 CFR 5060(a) would be amended to eliminate the expiration date for the interim limit;

* 57 CFR 5060(c) would be amended to authorize extensions from the final limit based upon an individual mine operator's economic circumstances;

* 57 CFR 5060(d) would be amended to expand the conditions under which exceptions from the requirements of the final limit could be authorized.

* 57 CFR 5061(b) would be amended to require the use of an elemental carbon surrogate when determining operator compliance with the requirements of the final limit;

* 57 CFR 5061(c) would be amended to eliminate the agency's authority to use occupational or area sampling in measuring compliance with the requirements of the final limit;

* 57 CFR 5062 would be amended to significantly alter when compliance plans must be utilized in connection with violations of the final limit, and the nature of such plans;

* 57 CFR 5071 would be amended to change the requirement for environmental monitoring in support of the final limit to a requirement for exposure monitoring, although the final limit remains a concentration limit at this time, and also eliminates the requirement that MSHA be able to designate certain positions to be monitored to ensure compliance with the final limit.

In proposing such changes, the agency is making certain assumptions about what it is going to do with the final limit. Such assumptions are improper, since the agency is only now seeking information about whether the final limit needs to be changed. Moreover the agency concedes that it lacks the data to make some of the determinations required (e.g., the data required to determine what, if any, elemental carbon surrogate is appropriate for the final limit). Moreover such amendments require a determination that the requirements of the existing rule are not feasible in connection with implementation of the final rule, a finding the agency currently lacks the information to make.

The agency should not include any of these changes in its final rule. Such proposals should instead be considered in the context of any proposed changes to the final limit.

2) Feasibility for individual mine operators – required controls, exceptions, and extensions of time to comply.

With very limited exceptions, the current rule requires operators to reduce dpm to the interim or final limit. The proposal would significantly broaden the potential circumstances under which mine operators would not have to do so, without any evidence these changes is required in order to make the rule feasible for the mining industry as a whole. These changes would have significant adverse effects on the miner health, and on the agency's ability to enforce the rule.

This discussion is divided into two parts. The first concerns the required controls, and exceptions thereto. The second concerns extensions of time to come into compliance with whatever controls are required.

To the extent that the proposals discussed here would amend the final limit, see also the discussion above under Heading C-1(b).

a) Required controls and exceptions.

Under current §§57.5060 (a) and (b), mine operators must reduce dpm to the applicable limit (interim or final), in all areas of a mine where miners may be exposed to dpm, regardless of the technological or economic difficulties this may pose for an individual operator. The provisions in subsection (d) of the current rule provide operators the opportunity to request approval for a limited exemption from the requirement to bring dpm concentrations down to the limit for certain inspection, maintenance and repair activities of a temporary nature. The provision also requires the use of personal protective equipment in such situations, and is one of only two situations in which the current rule allows the use of PPE. Exemptions are limited to one year, but may be renewed. Under the current rule, the PPE authorized for use during the duration of an exemption must be part of an MSHA-approved operator plan that includes a program for selection, maintenance, training, fitting, supervision, cleaning and use of personal protective equipment and must meet the minimum requirements established in §57.5005 (a) and (b).

The proposed rule would instead provide the following two sentences:

> "The mine operator shall install, use, and maintain feasible engineering and administrative controls to reduce a miner's exposure to or below the DPM limit established in this section.
>
> "When controls do not reduce a miner's DPM exposure to the limit, controls are infeasible, or controls do not produce significant reductions in DPM exposures, controls shall be used to reduce the miner's exposure to as low a level as feasible and shall be supplemented with respiratory protection in accordance with §57.5005(a), (b), and paragraphs (d)(1) and (d)(2) of this section."

Thus, under the proposal, unlike the current rule:

> * only engineering controls and administrative controls (i.e., work-practice controls, but not miner rotation) that are economically and technologically feasible for that particular operator must be utilized by an operator;
>
> * moreover, only controls that that produce significant reductions in dpm exposures must be utilized by an operator;
>
> * the aforementioned two restrictions on the types of controls that must be used would be true for all areas of the mine, not just those in which miners may have to temporarily work for inspection, maintenance or repair activities;

* the proposal would eliminate the requirement in the current rule that operators obtain yearly advance agreement by MSHA that a combination of engineering and work practice controls is not technologically or economically feasible for that operator, or do not produce significant reductions in dpm; and

* the proposal would eliminate the requirement in the current rule that operators obtain yearly advance approval by MSHA of their plans for the use of PPE.

* operators would not be required to have a specific plan for the use of PPE, but would be free to use PPE as long as it meets the specific requirements in §57.5005 (a) and (b) - as well as with the two new additional requirements concerning filters that are set forth in the proposal.

Lack of adequate legal justification for MSHA's proposed approach. The approach being proposed by MSHA is an entirely different paradigm than the one which was promulgated in January 2001.

MSHA points out that it has some rules that are like the proposal. Among these are the noise rule (30 CFR Part 62, applicable to the full mining industry) and the metal/nonmetal air contaminants standard (30 CFR 57.5005). The noise rule, for example, specifically requires that each operator is only required to utilize "feasible" controls – i.e., controls determined to be both economically and technologically feasible for that particular operator. The Review Commission has interpreted this requirement in the noise standard so as, for example, to not require operators to use a control which does not produce a significant reduction in noise, even though that reduction could help protect miners.

The fact that such practices are authorized under some MSHA rules does not make them a statutory requirement for all MSHA rules. In fact, just the opposite is true – the statute requires to agency to make special findings to promulgate a rule which takes individual operator feasibility into account.

The Mine Act requires that in promulgating a standard, the Secretary, based on the best available evidence, shall attain the highest degree of health and safety protection for the miner with feasibility a consideration. As the agency has pointed out on numerous occasions in this rulemaking -- including the preamble to this proposal – this does not require that the rule be feasible for each and every operator. Rather, it merely requires that the standard be feasible for the mining industry **as a whole**.

Although a rule which takes individual operator feasibility into account in determining what controls are required may save money for individual operators, it also reduces worker protection. Such a rule permits operators, for example, to use personal protective equipment (PPE) in lieu of engineering or work practice controls, if the latter are determined to be economically infeasible for that operator. As noted by MSHA in the preamble to the final rule, there is widespread consensus among all occupational health experts that PPE is not as effective as engineering or work practice controls in reducing

occupational risks. (66 FR 5862) Indeed, in the preamble to its new proposal, MSHA agrees with this very proposition. 68 FR 48711, 48713.

Because such an approach reduces worker protection, the statute requires that the agency find that more protective approaches – i.e., not taking individual operator feasibility into account – are not feasible for the mining industry as a whole. In promulgating the current rule in January 2001, the agency did determine that a limited exemption was necessary for areas of a mine visited only for limited periods of time for inspection, repair and maintenance. 66 FR 5857. It was because of this finding that the agency carved out a narrow exemption for work in such areas. To provide for a broader set of exemptions than was provided under the original rule, or to loosen the specific conditions under which those exemptions are authorized, requires a determination by MSHA that, based on new evidence, it would be infeasible for the mining industry as a whole to comply with the existing rule. MSHA lacks the evidence to make such a finding.

Instead of offering an explanation grounded in the statute, MSHA appears to assert three arguments.

First, the agency seems to be arguing that the changes in fact enhance worker protection rather than decreasing it. According to the agency, providing these opportunities will give the industry more flexibility, which in turn will boost compliance with the rule. (e.g., PREA, p.11, "Benefits"). Increasing compliance with the rule is of course good, and among equally protective options the one providing the most flexibility should of course be selected. But full compliance can also be accomplished by other means (e.g., enforcement) that do not allow less protective controls (PPE) to be used in lieu of more protective controls (engineering and work practice controls).

Second, MSHA seems to assert that because operators continue to have practical questions about complying with the limits, these uncertainties raise questions of feasibility for the industry as a whole. They do not. In fact, the record reveals that upon investigation by MSHA of the many concerns expressed by mine operators as to whether they could find controls that would work for them, the agency found that the concerns could readily be addressed. For example, as noted in the discussion under Heading C-1, above, concerning technological feasibility, most of the questions operators have had about the "feasibility" of using filters on certain types of equipment have been resolved by providing the operators with additional information. In fact, such questions led to the publication of a filter selection guide to further assist mine operators. Just because some operators require technical help doesn't mean that the rule is not feasible for the industry as a whole. In fact, other than the circumstances forming the basis of the current exemption (inspection, maintenance and repair in certain mine areas), MSHA has not been able to identify any situation where an operator may encounter a real problem in meeting either the interim or final limit. In fact, even in the preamble to this proposal, the agency states that it does not expect that operators will be unable to reduce dpm to the applicable limit except in the very circumstances which were the basis of the current exemption:

> " MSHA anticipates that very few mine operators will have significant compliance problems with meeting the proposed PEL in circumstances other than inspection, maintenance, and repair activities." (58 FR 48703)

Third, MSHA claims that the proposed changes in this regard are of no particular consequence are intended to simplify understanding of the requirements of the rule. "In most cases, the proposed changes and the existing rule impose similar requirements." 68 FR 48710; see also 68 FR 48713. The changes discussed here are not even considered in the PREA.

This conclusion apparently reflects a judgment by MSHA that although the language of the proposal allows any operator to claim that he is unable to feasibly comply with the applicable limit, in practice this will not open up the door to PPE use except in the situations which are covered by the existing exemption. Unfortunately, the agency has pointed to no basis for its optimism, and the proposed substitute is not likely to work in this fashion. While the current rule limits the areas of dispute with operators to a defined category of situations, the proposal opens up the potential for dispute to the full range of mining conditions.

By disputes, I mean disputes between operators and district directors (with the potential for higher level involvement as well), and disputes that are within the jurisdiction of the Review Commission to resolve. Disputes occur even when MSHA thinks they are not well founded. Moreover, even when MSHA thinks a solution is "feasible" for a particular operator, the Review Commission might in any case come to a different judgment. Based on past experience with this sector of the mining industry, it is reasonable to expect that changing this rule from one with clear requirements and a narrowly defined exemption, to a rule requiring a judgment by the agency in every case about available technology and the operator's economic circumstances, will result in more operators seeking to use PPE, more overhead for the agency and SOL, and less compliance rather than more. The fact that operators in the metal/nonmetal sector are familiar with the general concepts involved does not mean these disputes will not occur.

Consider a few examples of where such disputes may arise.

> * Technological feasibility. The proposal would provide that only engineering controls and administrative controls (i.e., work-practice controls, but not miner rotation) that are technologically feasible for that particular operator must be utilized by an operator. In the preamble, MSHA takes a view of how it thinks this requirement would be interpreted in certain circumstances:
>
> > "MSHA would consider, for example, a ceramic DPM filter to be a technologically feasible control for a piece of diesel equipment if there was evidence that the filter had been successfully applied to a similar engine subjected to similar operating conditions. The fact that a ceramic DPM filter had not been previously applied to that particular make and model of engine, or to that particular make and model of mining

> equipment would not, by itself, constitute a basis for determining that the application would be technologically infeasible. Also, the fact that the duty cycle of a particular piece of mining equipment might not be sufficient for passive controlled regeneration of a ceramic DPM filter would not, by itself, constitute a basis for determining that the application of that filter to that piece of mining equipment is technologically infeasible. In this example, unless additional substantive information establishing the technological infeasibility of the application is presented, MSHA would consider the filter to be a technologically feasible engineering control. Furthermore, MSHA would consider the filter to be technologically feasible even though a certain amount of applications engineering might be required to produce a workable or optimal system, including the need to re-locate, re-route or otherwise modify exhaust system components to facilitate filter installation, and the possible need for either on-board or off-board active or active/passive filter regeneration." 68 FR 48710

While no doubt this explanation is consistent with how the term "technological feasibility" has been used in the past, the level of detail here illustrates just how specific these kinds of determinations are going to be.

* Economic feasibility. The proposal would also provide that only engineering controls and administrative controls (i.e., work-practice controls, but not miner rotation) that are "economically feasible" for that particular operator must be utilized by an operator. According to the agency's explanation:

> " In determining economic feasibility, MSHA would consider whether the costs of implementing the control are disproportionate to the expected DPM concentration or exposure reduction, and whether the costs are so great that it would be unreasonable to require it is use to achieve those results. MSHA would, for example, expect ceramic DPM filters ranging in cost from $5,000 for smaller engines to $20,000 for larger engines to be economically feasible, particularly given the significant reduction these filters can achieve." (68 FR 48711)

While MSHA may consider $20,000 to filter each larger engine economically feasible for all operators, there are going to be some operators not likely to agree with this assessment in light of their size and current economic condition. The inherent difficulty in having the agency make assessments of the economic circumstances facing each mine operator holds a significant potential for disagreement and delay.

* Significant reductions. The proposal would provide that only controls which produce "significant reductions" in dpm exposures must be utilized by an operator. In the preamble, MSHA explains that:

> "MSHA believes that a 25% or greater reduction in DPM exposure (in laboratory or field trials) should be considered significant. MSHA, however, requests further comments on what would constitute a significant reduction in a miner's DPM exposure." 68 FR 48710

The fact that MSHA is not certain how to define this term in the context of dpm is indicative of the types of disputes likely to arise in connection with this critical requirement.

The latter point provides a simple illustration of the significant difference in worker protection between the operation of the current rule and that proposed. Under the current rule, operators would be required to an available engineering or work practice control that reduces dpm by 20% if that is necessary to reduce this hazardous substance, a probable carcinogen, to the applicable limit; under the proposed rule, less protective PPE could be used to fill this 20% gap. The potential benefit to mine operators of the proposed change is to allow some to save money at the expense of worker protection; whether the industry realizes any cost savings realized depends upon how diligent MSHA and the Review Commission are in keeping the barn door closed to non-meritorious claims.

It would appear that the real goal of this proposed change is to ensure that the agency does not adopt what some regard as a "precedent" for the metal and nonmetal sector. MSHA needs to keep in mind that it is only responsible for safety and health of one industry – mining – and a small one at that. The concept that each sub-sector of the industry (i.e., underground coal, surface coal, underground m/nm and surface m/nm) or each commodity should operate under its own set of practices simply because of historical development has no merit. More importantly, just because the agency adopts a particular approach for dpm in this sector does not mean it can automatically use that approach for everything else. Absent special statutory requirements, each rulemaking requires its own findings in accordance with the general requirements of the statute concerning health rules. Such findings have to be based on the facts in each case to survive challenge.

Finally, I would note that although my problems are grounded in the law, it would appear that MSHA ignored the advice of the health community in its new proposal. In its response to the ANPRM, NIOSH noted:

> "Respirators should be used by workers only in the following circumstances:
> * During development, installation, or testing of required engineering controls
> * When engineering controls are not feasible to control exposures to airborne contaminants during short-term operations, such as maintenance and repair
> * During emergencies" AB29-Comm.13, page 4

Administration under MSHA's proposed approach. The proposal would also weaken protection, and adversely impact the consistency of administration of the rule, by eliminating the requirement for advance approval to use PPE once a year. Specifically:

> * the proposal would eliminate the requirement in the current rule that operators obtain yearly advance agreement by MSHA that a combination of engineering and work practice controls is not technologically or economically feasible for that operator, or do not produce significant reductions in dpm; and
>
> * the proposal would eliminate the requirement in the current rule that operators obtain yearly advance approval by MSHA of their plans for the use of PPE.

MSHA does not include a discussion of the first change in the preamble of the proposed rule. This is surprising since the United Steelworkers of America, a party to the settlement litigation, made a specific comment on this question in response to the ANPRM:

> "Approval to working an area above the limit should continue to require advance approval by the Secretary, and should be reviewed periodically, and at the request of the miners' representative." page 3, AB29-Comm-15)

However, MSHA does include a discussion in the preamble as to why agency believes it does not need to seek advance approval for the use of PPE.

> "The Agency also considered whether mine operators should be required to apply in writing to the Secretary for approval to use respiratory protection. Some commenters recommended requiring approval by the Secretary before respiratory protection should be permitted as a means of compliance with the applicable DPM limit, but MSHA was not persuaded that such a step would be necessary and MSHA's proposed § 57.5060(d) does not include this recommendation. Respiratory protection functions as a supplemental control. Operators must have ready access to respirators when they must be used as is the case where the agency has allowed metal and nonmetal mine operators to do so for many years under MSHA's air quality standards. Moreover, the proposed control plan requirements in § 57.5062 and the application for extension in § 57.5060(c) would effectively require that mine operators specify when they plan to use respirators to control a miner's DPM exposure. MSHA, therefore, would know when mine operators intend to use respirators as an interim measure until compliance can be achieved through the application of engineering and administrative controls. Further, when a mine operator is issued a citation under proposed § 57.5060(d) for a miner's exposure exceeding the applicable DPM limit, and the mine operator intends to use respiratory protection as an interim control measure, MSHA would make certain that a respiratory protection program is established and appropriate respirators are used in accordance with § 57.5005(a), (b) and proposed paragraphs § 57.5060(d)(1) and (d)(2) concerning filter selection for airpurifying respirators. Accordingly, this requirement can be deleted from the existing rule without reducing protection to the miners." (68 FR 48712)

The conclusion does not flow from the assertions. The argument about control plans and extensions makes no sense, as under the proposed rule, only a very limited portion of

those operators who are able to use PPE under the revised requirements would have to submit either a control plan or a request for an extension. The argument about citations simply reaffirms my comment – that until the agency inspects and cites, an operator would be free to use PPE in any manner the operator wants. If the agency is asserting that pre-approval of plans by MSHA makes no contribution to miner protection, it should substantiate that bold claim, and propose appropriate changes to a number of rules.

One benefit generally attributed to the approval process is to ensure consistency in treatment, resolving questions through give and take before implementation rather than in the course through citation, internal appeal, and litigation. In fact, as indicated in the preamble to the 1998 proposed rule (63 FR 58118) and the final rule (66 FR 5707), MSHA committed itself to establishing a national panel to provide technical assistance to district offices in processing requests for exemptions and extensions, so as facilitate consideration and consistency. MSHA should keep the pre-approval requirements of the current rule and fulfill its commitment to establish a national technical panel.

b) Extensions of time to comply**.**

As promulgated in 2001, the dpm rule requires all mine operators to come into compliance with the *interim* concentration limit on its effective date. By the terms of the rule, all operators received an extension of 18 months from the date the rule was promulgated for MSHA to provide technical assistance. Operators had already been provided with extensive information about a toolbox of controls, and each operator was authorized to choose whichever combination of controls was most efficient for that operator to use to reduce dpm to the interim limit. MSHA even provided the roughly 200 operators of mines covered by this rule with a spreadsheet tool that allows them to estimate the costs of various alternative control combinations, so as to assist them in finding the most cost-effective solution for each mine. In fact, this tool was used by the agency in determining the feasibility of the rule proposed in 1998 (63 FR 58199).

The dpm rule also requires all mine operators to come into compliance with the *final* dpm concentration limit by January 2006, again by using any combination of controls that could reduce dpm to that limit. In other words, all operators received an extension of five full years from the date the rule was promulgated to come into compliance with the final limit.

However, the existing rule permits a mine operator to apply for a "special" extension of the final limit for up to an additional two years. The special extension is not renewable. Such a special extension can only be granted if MSHA determines that "there is no combination of controls that can, due to technological constraints, bring the mine into full compliance" with the final limit on time (i.e., by January 19, 2006). Miners are to be equipped with personal protective equipment as one of the conditions of such an approval. (This is only one of the two situations in which the current rule authorizes the use of PPE; the other is in the case of approved exemptions, as discussed above).

To grant a particular mine operator a special extension of time to comply with a limit is in essence to change the effective date of the limit for that mine operator, and permit that operator to use less protective PPE in lieu of engineering or work practice controls. As described in the preamble to the proposed rule (66 FR 58183) and the final rule (68 FR 5861), the situations warranting extension were expected to be rare if there were any at all. The special extension was provided because at the time, the agency determined there might be unforeseen circumstances that would warrant its consideration. As discussed below, based on the accumulation of additional information since that time, this assumption is highly questionable. The preamble to the final rule was also clear that the agency could not justify allowing economic considerations to be a valid reason for a special extension, given the long extension given to all operators to come into compliance with the final rule. (60 FR 5861).

The changes proposed by MSHA would significantly expand the conditions under which mine operators could receive special extensions of time to comply – and thus, the circumstances under which less protective PPE could be substituted for more protective engineering and work practice controls:

* Unlike the current rule, extensions could be requested for compliance with the interim limit;

* Unlike the current rule, extensions could be requested based upon economic feasibility for an individual operator; and

* Unlike the current rule, more than one extension would be allowed (for either technological or economic reasons).

The agency lacks an adequate legal justification for these proposed amendments. The legal deficiencies are akin to those with the proposed amendments to the provisions of the rule on what controls operators are generally required to utilize, as discussed above..

The Mine Act requires that in promulgating a standard, the Secretary, based on the best available evidence, shall attain the highest degree of health and safety protection for the miner with feasibility a consideration. As the agency has pointed out on numerous occasions in this rulemaking -- including the preamble to this proposal – this does not require that the rule be feasible for each and every operator. Rather, it merely requires that the standard be feasible for the mining industry **as a whole**.

Although the proposed substitute for the current rule may save money for individual operators by delaying when those operators have to come into compliance, it also reduces worker protection. Such a rule permits operators, for example, to use personal protective equipment (PPE) in lieu of engineering or work practice controls, for the duration of the extension. As noted by MSHA in the preamble to the final rule, there is widespread consensus among all occupational health experts that PPE is not as effective as engineering or work practice controls in reducing occupational risks. (66 FR 5862) Indeed, in the preamble to its new proposal, MSHA agrees with this very proposition. 68

FR 48711, 48713. Because such an approach reduces worker protection, the statute requires that the agency find that more protective approaches are not feasible for the mining industry as a whole.

MSHA lacks the evidence to make such a finding. In promulgating the current rule in January 2001, the agency determined that to be feasible for the mining industry as a whole, the rule needed to authorize an extension in the limited situation only "where there is no combination of controls that can, due to technological constraints" bring the mine into full compliance with the final limit on time -- i.e., by January 19, 2006, a full five years after the rule was promulgated. (68 FR 5861) There is absolutely no evidence in the record of the need for any extensions other than that permitted by the final rule; the proposals allowing extensions to come into compliance with the interim limit are particularly offensive, given the added year operators were illegal granted by this Administration to come into compliance. In fact, as discussed in detail under heading C-1(a), there is ample evidence that the industry as a whole can meet an even lower interim limit now and that the final limit can be implemented sooner, both technologically and economically. While I have reviewed the assertions of Stillwater Mining that despite its efforts it is still not in compliance with the interim limit, I can only point out that its decision not to commit to a particular technology after all this work is its own doing, and does not provide any evidence that compliance is in fact infeasible for that company much less for the industry as a whole.

Turning to the final limit, the agency has not offered a legal rationale for allowing extensions to the final limit based on individual operator economic circumstances -- not with 5 years of advance notice of the rule's requirements, the provision of the Toolbox and Estimator, countless meetings, and all sorts of other technical assistance from MSHA. Of course some operators may not have planned engine, ventilation or control upgrades to occur on the same schedule required by MSHA, but that is hardly evidence supporting a reduction of miner protection under the statute.

In fact, in light of the additional evidence on feasibility gained over the three years, the agency needs to revisit whether the extension permitted under the current rule is still warranted. If not, the agency is obligated to remove it so as to enhance worker protection. In particular, the agency should consider new information about the value of ventilation system improvements that are less complex than those which the agency initially thought might be required for many mines to reach the final limit. The agency could think of no specific examples that would require an extension when it promulgated the current rule; and to its credit, has now asked the mining community if anybody can think of any examples. (68 FR 48709). If there are no credible examples this far along the path, the existing extension should be eliminated.

Instead of offering an explanation for its proposal grounded in the statute, MSHA appears to assert the same three arguments for additional extensions as it asserts in connection with its proposed changes to required controls. First, the agency seems to be arguing that the changes in fact enhance worker protection rather than decreasing it. Second, MSHA seems to assert that because operators continue to have practical questions about

complying with the limits, these uncertainties raise questions of feasibility for the industry as a whole. Third, MSHA claims that the proposed changes are of no particular consequence are intended to simplify understanding of the requirements of the rule.

These arguments hold no more merit with respect to extensions than they do with respect to required controls. Briefly:

* Full compliance can also be accomplished by other means (e.g., enforcement) that do not allow less protective controls (PPE) to be used in lieu of more protective controls (engineering and work practice controls);
* Just because some operators require technical help doesn't mean that the rule is not feasible for the industry as a whole.
* While the current rule limits the areas of dispute with operators to a defined category of situations, the proposal opens up the potential for dispute to the full range of mining conditions.

For a more complete discussion of the problems with MSHA's arguments, please consult the discussion above concerning required controls.

3) Feasible type of limit and types of compliance sampling.

MSHA is proposing to change the interim concentration limit to an interim personal exposure limit (PEL). MSHA has also stated its intent to propose a PEL to replace the final concentration limit, and has reflected this decision in several elements of the proposal (e.g., the reference in proposed §57.5060(a) to a "final DPM exposure limit", and the title and content of proposed §57.5071. In a related action, the proposal would eliminate the authority of the agency to use area and occupational sampling in determining compliance with both the interim and the final limits.

These changes are not warranted under the law. First, PELs are inherently less protective than concentration limits pegged to the same number; accordingly, the agency cannot make this amendment without determining that the existing, more protective approach is not feasible for the mining industry as a whole. Second, in some cases, area and occupational sampling can be more protective than personal sampling; accordingly, the agency cannot make this amendment without determining that the existing, more protective approach is not feasible for the mining industry as a whole. Third, to the extent this amendments affects compliance with the final limit, the agency is premature in proceeding at this time (in support of this assertion, please see the general discussion of this topic under Heading C-1(b).

To illustrate the first point, let's examine the difference between an interim PEL of 500 micrograms of dpm per cubic meter, and an interim concentration limit of 500 micrograms of dpm per cubic meter. Under a PEL, if the miner moves from one area of the mine to another during the course of the shift, his exposure in some areas of the mine can be higher 500 if his exposure in the other areas is low enough to bring his total shift

exposure average down to the PEL. By contrast, concentration limits, often called environmental limits, ensure that the level of a harmful substance in a particular area or workstation never exceeds 500. This means that no matter where a miner works, his or her exposure during any period of time will never exceed 500 – and for the majority of miners who are moving around, this means their personal exposures will be far less than 500 for the shift.

To take the same numeric values (e.g., 500, 200) and baldly claim that personal exposure limits with those values offer the same protection to miners as concentration limits with those values -- which MSHA does in the preamble to this proposed rule (68 FR 48713) -- is to completely ignore language and history of one of the key issues in the agency's rulemaking. In 1998, MSHA proposed both interim and final "concentration" limits, and went to some length to emphasize what it intended. Most of the extensive evidence about the risks of dpm exposure evaluated by MSHA was based on ambient concentrations of dpm, not on personal exposure measurements. When setting ambient air standards for the general public from particulate matters, EPA has always used concentration. Moreover, MSHA and the mining community were already well aware of the difference between a concentration limit and a personal exposure limit; the most comparable mining risk is coal dust, and by statute, it is controlled by a concentration limit.

The concept of a limit on concentration in each area of the mine was central to developing the costing assumptions in the agency's preliminary and final regulatory impact analyses. The concept was the discussion of considerable written comment and discussion during the rulemaking hearings. The agency determined that concentration limits at the levels proposed were feasible for the metal and nonmetal industry as a whole. Neither the language of the proposed or final rule, nor their explanatory preambles, could possible be more clear that MSHA was adopting concentration limits, not personal limits.

Independently of the proposal to replace the concentration limit with a PEL, the proposal would limit the agency to the use of personal sampling in determining compliance. The current rule authorizes MSHA to select among personal, occupational or area sampling as appropriate in taking measurements for compliance with the concentration limits.

The agency was quite clear throughout the rulemaking that to effectively enforce a concentration limit, all three types of sampling would be required. In the preamble of the 1998 proposed rule, for example, the agency pointed to types of situations where personal sampling might need to be supplemented by occupational or area sampling to get an accurate picture of dpm concentrations. 63 FR 58185. A similar discussion was included in the preamble to the final rule. 66 FR 5867. In that discussion, the agency also responded to comments from the mining community expressing concerns about the possible misuse of area and occupational sampling as methods for evaluating dpm concentrations. The agency pointed out that it had experience with the use of such sampling methods in the coal sector, and that the method had been validated by the Federal courts. 66 FR 5867. In fact, the Tenth Circuit Court of Appeals itself noted the specific advantages of a sampling program that goes beyond personal sampling:

> "The area sampling program has several advantages over a personal sampling program. The most important advantage is that area sampling not only measures the concentration of respirable dust, it allows identification and thus control of dust generation sources. Control of dust at the source will obviously contribute to reducing the level of personal exposure. By contrast, the results of personal samples do not allow identification of dust sources due to the movement of miners through various areas of the mine during the course of a working shift. Thus, while a personal sampling system makes possible the identification of discrete individuals who have been overexposed, it does nothing to ensure reduction of dust generation because the source of the dust cannot be determined. Therefore, it clearly appears that area sampling can rationally be found to be superior to personal sampling as a means of enforcing (as opposed to merely measuring) compliance…"(American Mining Congress v. Marshall, 671 F.2d 1251 (1982)

Further, the agency stated was not its intent to use these sampling methods in an improper manner, and indeed stated that:

> …the agency would not consider it appropriate to conduct area sampling for compliance determinations in areas where dpm exposures, if any, would be infrequent and brief; in areas where miners work exclusively inside closed cabs; and in shafts, inclines, slopes, adits, tunnels and similar workings that are designated as return or exhaust air courses and that are also used for access into, or egress from an underground mine." (66 FR 5868).

The agency discussed these situations in some detail, as well as others – e.g., how close to a tailpipe to place a sampler, and sampling procedures concerning miners who perform multiple work tasks during a shift.

The agency also pointed out that if it relied exclusively on personal sampling, it might be difficult to conduct sampling in certain situations if total carbon is the surrogate for dpm. 66 FR 5869 While the agency has proposed to change the surrogate to elemental carbon, enabling it to avoid this problem, it lacks the evidence required to support such a change as discussed in detail under Heading C-4 of these comments.

These are among the reasons why, in the preamble to the final rule, MSHA correctly stated that rulemaking would be required for the agency to abandon any of these sampling methods:

> …the Agency wishes to make it clear that in putting explicitly into the rule that the Agency can use any of the three methods specified, it intends by that action to ensure that any policy that would broadly restrict the use of one or another of these methods would have to be the subject of new rulemaking. Thus, for example, any policy to significantly restrict the use of area sampling to enforce compliance with this rule would have to be the subject of new rulemaking action,

> as the availability of that method was a key consideration in MSHA's decision that it could implement a concentration limit." (66 FR 5870)

To change the current rule, the agency has to establish either that the restrictive sampling approach will not be less protective than the existing rule, or that the existing rule is not feasible in some way. It has no evidence in support of such a contention, and hence cannot sustain this proposed amendment. Simply pointing out that personal sampling is traditional in this sector of the mining industry does not meet either of these tests.

The agency does have a practical reason for wanting to dispense with any method but personal sampling. It is likely that until operators in the underground metal and nonmetal sector get used to area and occupational sampling, citations based upon such sampling methods are likely to be challenged before the Mine Safety and Health Review Commission. It is with that consideration in mind that I recommend that in lieu of these proposed amendments, the agency simply consider adopting an internal policy that any proposed citation under based on an area or occupational sample must first be reviewed by the national office. Such a policy will help to meet the continued concerns expressed by the mining industry about proper implementation of the concentration limits. While it is true that such a policy could be changed under another administration, this is unlikely absent consensus within the mining community, and given the value of reviewing citations likely to require the expenditure of agency resources to defend operator challenges.

4) Surrogate for compliance sampling.

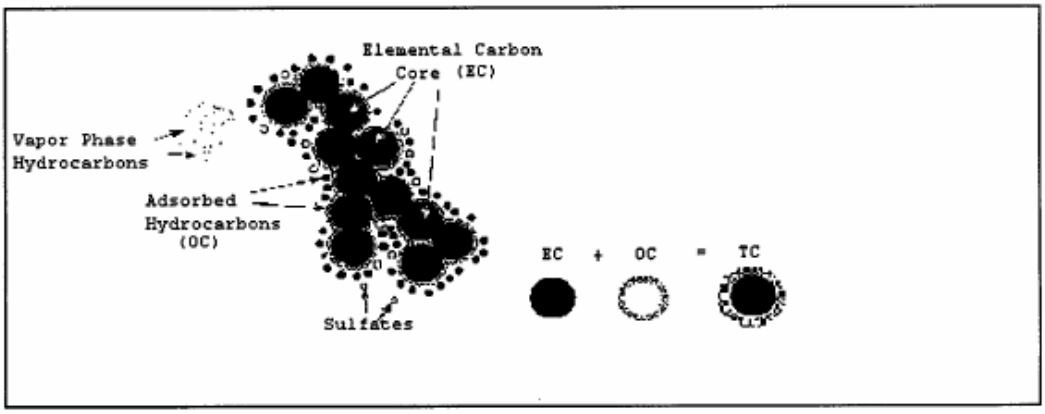
The proposal to change the surrogate used to measure dpm in underground metal and nonmetal mines, from total carbon to elemental carbon, is without foundation. The record does not support the agency's claim that the amount of elemental carbon is an accurate surrogate for the amounts of dpm that need to be measured under actual mining conditions. Moreover, the record does not support the agency's claim that there is no solution to interference issues that arise when total carbon is used as the surrogate for dpm, a method otherwise acknowledged to provide an accurate method for determining the amounts of dpm that need to be measured under actual mining conditions. However, MSHA may wish to consider whether adopting the approach taken in the coal sector, which does not require dpm compliance sampling, would be feasible for the mining industry in certain situations and provide equivalent or better protection for miners.

A key consideration in establishing an occupational limit for a hazardous substance is ensuring that there is a reliable method to measure the amount of the substance in a working environment. Accordingly, MSHA and the mining community have a long history of careful attention to measurement issues. The extensive attention to these issues by technical experts throughout this rulemaking is reflected in the detailed discussion in the preamble to the final rule (66 FR 5718 – 5730, 5863-5870), and the final rule was based on a careful evaluation of the pros and cons of various alternatives considered.

As MSHA explained in the preamble to its final rule (66 FR 5718), there is no direct method for accurately measuring the ambient diesel particulate matter (dpm) at the levels required to protect miners. There are, however, components of dpm that can be directly measured pursuant to a method developed by the National Institute for Occupational Safety and Health (Method 5040) and validated to meet NIOSH's accuracy criterion.

The figure reproduced below from MSHA's preamble is a pictoral representation of the composition of dpm. Scientists have validated that dpm is always composed of about 80% carbon. (66 FR 5719). Some of this carbon is "elemental" and some is "organic", but the "total" carbon is always about 80-85% of diesel particulate matter. (The remaining 15-20% of dpm consists of sulfates.). The NIOSH method can accurately measure the amount of both elemental carbon and organic carbon present in underground mines. Accordingly, if dpm is the only source of carbon underground, measuring the amount of these components should accurately measure the amount of dpm. This allows these components to function as "surrogates" for dpm.

Figure II-3
DPM components



Unfortunately, neither component of dpm can be accurately measured in underground coal mines. This is because the entire atmosphere of underground coal mines is permeated with something else (coal dust) that might inadvertently be mistaken for those components. That is why the rule on dpm adopted for the coal sector does not involve a dpm limit nor compliance measurements. Instead, MSHA required all mine operators in that sector to use specific control technologies to limit dpm emissions, based on calculations by the agency as to the reduction of dpm such measures would produce (for a detailed explanation of how the agency determined the effect of these controls, and alternatives considered for this sector, see 66 FR 5691-5695.).

In underground metal and nonmetal mines, the presence of ambient coal dust is not a problem. Accordingly, the agency turned to the question of which of the dpm components – elemental carbon or total carbon (elemental plus organic) – would be the

most accurate surrogate for dpm. After reviewing all of the literature and comments on the point, the agency elected to use total carbon as the surrogate for dpm rather than elemental carbon.

In making this selection, the agency specifically took account of the fact that there are, in fact, two other sources of organic matter present in certain underground metal and nonmetal mining operations which, in certain circumstances, could be mistaken for dpm using the total carbon method – the oil mists emanating from drilling equipment, and tobacco smoke. Oil mist and tobacco smoke are potential interferences because both contain significant amounts of organic carbon, and the NIOSH method is not capable of distinguishing organic carbon from these sources from that originating from diesel emissions.

> * Other possible sources of interference were thoroughly reviewed and determined by MSHA not to pose a practical problem, provided the submicron impactor is used. See the extensive discussion beginning at 66 FR 5727. This conclusion was reinforced by the work done since that time as cited in the preamble of the proposed amendments – see, e.g., 68 FR 48707).
>
> * The agency noted that these potential interferences do not pose a problem to using a total carbon surrogate in a non-smoking mine, or a mine in which the operator requires miners to avoid smoking in areas being sampled by MSHA and to confine sampling to those areas where active drilling is not taking place. The agency has not provided information for the record on the percentage of mines or mine areas where there are likely to be interference problems.

After conducting a number of studies of these two potential interferences, MSHA nevertheless determined that it could accurately measure dpm by using total carbon as the surrogate. The agency determined the problems could be avoided by location of the sampler and type of sample. Specifically:

> * Oil mists are an interference "that can be addressed by not sampling too close to the source of the interference…when MSHA collects compliance samples on drilling operations that produce an oil mist, or where organic solvents are used, personal samples will not be collected. Instead, an area sample will be collected, upwind of the driller or organic solvent source." 66 FR 5729
>
> * "The effect of cigarette smoke was even more localized to the smoker than the oil mist was to the stopper or jack leg drill. Twenty five feet upwind of the smoker, no carbon attributed to cigarette smoke was detected….Sampling twenty-five to fifty feet down wind of a worker smoking 10 cigarettes per day would add no more than 3 ug/m3 a day to the worker's exposure (PS&HTC-DD-518)….Accordingly…when MSHA collects compliance samples, miners will be requested not to smoke. If a miner does want to smoke while being sampled, and is not prohibited from doing so by the mine operator, the inspector will collect an area sample a minimum of twenty-five feet upwind or downwind of the smoker.

> Smokers working inside cabs will not be sampled." 66 FR 5730. The agency also noted it would not sample particular areas, occupations or persons where smoke could interfere with the result. 66 FR 5869

While conceding that it would have to adopt sampling practices to avoid these interferences, and that these would restrict compliance sampling, the agency concluded that if it observed such restrictions, it could accurately use total carbon as a surrogate for dpm. The agency then converted its interim and final dpm limits to equivalent amounts of total carbon. For example, having determined it was feasible for this sector of the industry to reduce dpm concentrations to an interim limit of 500 micrograms of dpm per cubic meter, the agency converted this into a total carbon limit of 400 micrograms per cubic meter (400 is 80% of 500; 80% is the lower boundary of the amount of dpm composed of carbon).

The agency has since concluded that there are additional problems with the total carbon surrogate. Before considering these, however, it is worth looking at the surrogate the agency is now proposing as an alternative, elemental carbon.

In developing the proposed rule in 1998 and adopting the final rule in 2001, the agency gave extensive consideration to the possible use of elemental carbon as a surrogate. Elemental carbon has significant advantages as a surrogate because it avoids the interference problems presented by the use of total carbon in this mining sector. Oil mist and tobacco smoke are interferences (i.e., can be mistaken for dpm) because they contain organic carbon, not because they contain elemental carbon. The only significant source of elemental carbon in underground metal and nonmetal mines is dpm. Hence, if elemental carbon were an accurate surrogate, operators and the agency would not have to be concerned with the interference issue. In practice, this means that using EC as the surrogate eliminates potential operator questions about this type of sampling problem, and the associated overhead for both operators and the agency of challenges to citations.

Nevertheless, as MSHA explained in the preamble to the final rule, it could not adopt elemental carbon as the surrogate for dpm for one simple reason – there is no scientifically accepted method for determining the amount of dpm based on the amount of elemental carbon. 66 FR 5726. This includes NIOSH, which has so far declined to provide a conversion formula that would allow MSHA, for compliance purposes, to equate a single-sample measurement of elemental carbon to a specific amount of dpm. In fact, were NIOSH willing to do so, this proposed amendment of the rule itself would be unnecessary; the rule specifically authorizes MSHA to adopt, without further rulemaking, methods certified by the National Institute for Occupational Safety and Health as providing "equal or improved accuracy for the measurement of diesel particulate matter" (30 CFR 57.5061(b). As noted in the preamble to the final rule:

> " MSHA notes that NIOSH has asserted that the ratio of elemental carbon to dpm is consistent enough to provide the basis for a standard based on elemental carbon ("*** the literature and MSHA laboratory tests support the assertion that DPM, on average, is approximately 60 to 80% elemental carbon, firmly establishing EC as

> a valid suorrogate for DPM"). However, while an average value for elemental carbon percent may be a useful measure for research purposes, data submitted by commenters show that elemental carbon can range from 8 percent to 81 percent of total carbon." 66 FR 5726.

For the agency to now cite NIOSH as the basis for changing its mind in this regard (68 FR 48705), and to assert that data showing dpm is on average approximately 60 to 80% elemental carbon is accurate enough to provide the basis to use EC as a surrogate for DPM in single-sample compliance determinations, is to simply to reverse its conclusions with no new facts and in contradiction to the facts that have been available.

The reason why the scientific community has not been able to agree on the amount of dpm present when a specific amount of elemental carbon is detected in a single sample is that the composition of the carbon in the dpm emitted from one source is **different** from that emitted by another source. Even though the total amount of carbon emitted is always about 80% of dpm, some emissions have more organic carbon and some have more elemental carbon. As MSHA has repeatedly pointed out, the ratio of elemental carbon to total carbon in underground mines is dependent on the duty cycle at which the diesel engine is operated, and engine operating characteristics. (66 FR 5726; subsequently, the differential impact of cleaner engines on OC and EC has been substantiated by data added to the record. Bagley, Watts et al., Impact of Low-Emission Diesel Engines on Underground Air Quality; NIOSH emissions and control technology meeting on March 4, 2003). In addition, exhaust filters may have different effects of EC and OC emissions. (68 FR 48686). Thus if elemental carbon is selected as a surrogate, the practical impact of the interim and final concentration limits – and the health protection they offer to miners – will vary from mine to mine, from area to area in each mine, and over time in the same area (depending, for example, on the equipment present and how it is being used).

Of particular concern with adopting the EC method for compliance purposes is that these inherent are likely to get worse over time over time as mine operators fit their equipment with more (and more varied) aftertreatment filters in order to reach the final concentration limit. According to MSHA's initial costing assumptions for the interim limit, it was anticipated depending on the mine size and type of equipment, between 25% and 75% of that equipment would have to be filtered just to meet the interim concentration limit, with the vast majority of pieces of production equipment requiring filters. (REA, p.46) As the agency now points out, while the use of after-treatment filters has grown, the need has not turned out to be as extensive as originally anticipated, probably as the result of the introduction of clean engines, better maintenance, and other factors as confirmed by MSHA's baseline sampling (68 FR 48695), and that such methods, together with simpler than anticipated ventilation upgrades, can in many cases be a cost-effective approach to compliance with the interim limit (68 FR 48700). Nevertheless, despite all the additional information it has gathered about actual mine conditions since the rule was promulgated, MSHA continues to anticipate that extensive use of aftertreatment filters will be the most likely approach taken by the industry to comply with the final limit. (68 FR 48703)

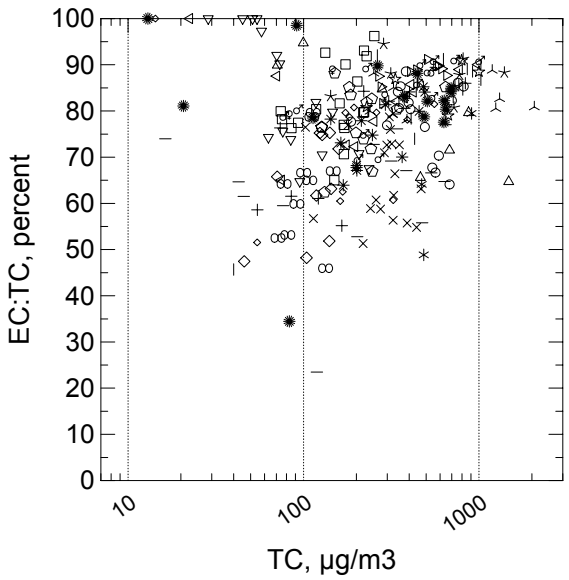
The preamble to the proposed rule continues to acknowledge these problems with adopting EC as a surrogate. Nevertheless, the agency is now proposing to change the surrogate used to measure dpm from total carbon to elemental carbon. For the interim limit, the agency is proposing that instead of using 400 micrograms/cubic meter of total carbon as the surrogate for 500 micrograms/cubic meter of dpm, 308 micrograms/cubic meter of elemental carbon be used as the surrogate. Moreover, although the agency is not proposing at this time to replace the surrogate for the final concentration limit of 200 micrograms/cubic meter of dpm (presently 160 micrograms/cubic meter of total carbon as the surrogate) with a particular elemental carbon surrogate, the agency's proposed amendments to §57.5061(b) would require that elemental carbon measurements be used in determining compliance with both the interim and final limits. The amendment to §57.5061(b) accordingly represents a conclusion by the agency that an elemental carbon surrogate is appropriate for the final concentration limit, even while leaving open for further comment the question of the numerical value to assign.

According to the explanation offered by the agency for the specific amendment to the interim limit, the agency was able to derive a way to convert the TC surrogate in the current rule to an EC equivalent by using a special set of data it developed in the 31-Mine study, and which was incorporated into the settlement agreement:

> " To convert the interim TC concentration limit…to an equivalent EC exposure limit, MSHA is proposing to use a factor of 1.3….This 1.3 factor was specified under the terms of the settlement agreement … and is based on the median total carbon to elemental carbon (TC/EC) ratio observed for valid samples in the 31-Mine Study…." 68 FR 48705.

A look at the report of the 31-mine study confirms this assertion, but also illustrates in graphic form how widespread the ratio of EC to TC can be from sample to sample:

"Figure VI-3 plots the EC:TC ratios observed in the 31-mine study against the corresponding TC concentrations. The various symbols shown in the plot identify samples taken at the same mine. The EC:TC ratio ranged from 23 percent to 100 percent, with a mean of 75.7 percent and a median of 78.2 percent. Note that the reciprocal of 0.78, which is 1.3, equals the median of the TC:EC ratio observed in these samples. (Ft: The median of reciprocal values is always equal to the reciprocal of the median. This relationship does not hold for the mean.) The 1.3 TC:EC ratio was the value accepted, under terms of the settlement agreement, for the purpose of temporarily converting EC measurements to TC measurements." 68 FR 48686, 48687



Moreover, another problem with basing an EC surrogate on the data derived from the 31 mine study is ably set forth by the agency itself:

> "It is important to note that most of the samples in this study were taken **in the absence of exhaust filters** to control DPM emissions. Since exhaust filters may have different effects on EC and OC emissions, the results described here apply only to mine areas where exhaust filters are not employed." (68 FR 48686, emphasis added)

While the agency has had adequate time and opportunity to take measurements in mine sections in which aftertreatment filters are common, and hence develop the required information, the agency has not done so. NIOSH, for example, advised the agency to use the baseline data it was collecting to help better assess the EC:TC ratio (NIOSH response to Draft of 31-mine study, June 5, 2002). Instead, the agency spent that time collecting extensive baseline data which it concedes is not suitable for deriving the necessary data:

> "Unlike the 31-mine study, no special precautions were taken during MSHA's baseline sampling to avoid tobacco smoke or other substances that could potentially interfere with using TC (i.e., EC + OC) as a surrogate measure of DPM. Therefore, the baseline data should not be used to evaluate the OC content of DPM or the ratio of EC to TC within DPM." (68 FR 48686)

Notwithstanding the shortcoming of the baseline data in this regard, the agency asserts that it validates the ratio of EC:TC within DPM that was derived from the 31-mine study, and concluding that: "There is a 93.7% concurrence between the two methods of calculating TC (used in the baseline study….)" (68 FR 48674)

Accordingly, the agency's claim that it is providing equivalent protection to miners (68 FR 48705) in switching from a surrogate of 400 micrograms of total carbon to one of 308

micrograms/cubic meter of elemental carbon is not accurate. This is unfortunately the case even if the agency now has evidence that most mines will initially be complying with the interim limit without the need to significantly rely upon particulate filters (e.g., by using cleaner engines. And as noted, the problem will only be worse for the final limit.

Given these problems with an elemental carbon surrogate, which the agency has failed to resolve, let's consider the additional problems with the total carbon surrogate which MSHA believes it has uncovered since the current rule was issued – problems which have led the agency, and many in the mining community, to conclude that a total carbon surrogate is unworkable .

First, there is the issue of oil mist interference from drilling operations. When the agency issued the current rule, as noted above, it asserted that:

> "Oil mists are an interference "that can be addressed by not sampling too close to the source of the interference…when MSHA collects compliance samples on drilling operations that produce an oil mist, or where organic solvents are used, personal samples will not be collected. Instead, an area sample will be collected, upwind of the driller or organic solvent source." 66 FR 5729

By contrast, after reviewing the data collected in the 31-mine study, the agency concluded that "no reasonable method of sampling with TC as the surrogate for DPM was found to eliminate interferences from drill oil mist." (31-Mine Study, p.68).

Table IV-1 of the 31-mine study shows the results of dpm sampling for oil mist interference, and it is reprinted here for refernce. The data consist of samples in 3 mines. Area samples were taken. Some of the area samples taken downwind were in the stope, and others were not.

Table IV-1 Results of DPM Sampling for Oil Mist Interference

		Average Concentrations				Average Concentrations		
		Static Blank Corrected				Dynamic Blank Corrected		
Location	Airflow	OC	EC	TC		OC	EC	TC
	Cfm	µg/m^3	µg/m^3	µg/m^3		µg/m^3	µg/m^3	µg/m^3
Mine 1-A								
Intake	123,900	36	11	47		17	5	22
Operator		220	9	228		225	12	237
1 Ft. DW *	5,400	26	6	32		31	8	39
100 Ft. DW *	5,400	0	8	8		11	11	21
230 Ft. DW **	28,100	3	11	14		10	13	23
Mine 1-B								
Intake	125,000	167	27	194		117	23	140
Operator		435	25	460		347	25	371
1 Ft. DW *	6,100	120	25	145		81	20	100
100 Ft. DW *	6,100	49	25	74		7	19	25
230 Ft. DW **	28,500	27	21	48		2	20	22
Mine 2-A								
Intake	4,200	31	66	97		28	67	96
Operator[1]		void	void	Void		void	void	void
4 Ft. DW *	4,200	312	78	390		262	75	338
180 Ft. DW *	4,200	192	76	268		133	75	209
500 Ft. DW *	4,200	92	32	125		44	32	76
Mine 2-B								
Intake	4,200	65	116	181		49	112	161
Operator		211	110	321		171	110	282
5 Ft. DW *	4,200	145	113	258		122	108	231
180 Ft. DW *	4,200	92	93	186		68	87	155
500 Ft. DW *	4,200	96	115	210		76	112	188
Mine 3-A								
Intake		0	4	4		1	5	6
Operator		180	9	189		173	8	181
5 Ft. DW *	7,200	79	4	83		77	3	80
100 Ft. DW **	7,700	79	4	83		75	6	81
280 Ft. DW **	18,000	22	4	26		25	4	29
Mine 3-B								
Intake		0	4	4		2	4	7
Operator		104	9	114		108	9	117
5 Ft. DW *	6,000	31	4	35		33	5	39
100 Ft. DW **	6,600	54	4	58		51	0	51
280 Ft. DW **	17,700	15	6	22		26	6	32

[1] Sample voided due to equipment malfunction.
DW – Downwind of ventilation tubing discharge
*- Collected in stope ** - Collected outside of stope

Samples from mine 1 had significantly less organic carbon (and total carbon) downwind than at the intake; but if the samples can be considered at all, the samples downwind outside the stope do not show signs of interference. Samples from mine 2 shows elevated organic and total carbon 180 feet downwind in the stope, but only a slight increase (or in one case a decrease) over the intake levels 500 feet downwind, but still in the stope. Samples from mine 3, which apparently had a short stope, indicate elevated levels 100 feet downwind but negligible increases at only 280 feet downwind. This seems to suggest that prohibiting personal sampling of drilling operators, and area samples within a few hundred feet, can eliminate any potential for oil mist interference. Hence the data does not support the agency's conclusion that there is "no reasonable method of sampling with TC as the surrogate for DPM was found to eliminate interferences from drill oil mist."

The expert on this matter, NIOSH, reached a similar conclusion. After reviewing the data from the 31-Mine study, NIOSH concluded that oil mist interferences could be controlled in the manner originally outlined by the agency in its final rule:

> "Oil mists contamination can be avoided by sampling upsteam of stope or sampling far enough downstream that the oil mist has been diluted enough to give a minimal TC concentration." June 5, 2002 letter from Dr. Kohler, page 6.

Of course, if area samples not permitted, as they would not be under the proposed rule, then indeed miners engaged in drilling and those nearby will not be able to be sampled if TC is used as a surrogate. This is one of the reasons why, as discussed under Heading C-3, area sampling is more protective than personal sampling.

Second, the agency concluded that it could not resolve problems with tobacco smoke interference in the manner intended. As noted above, when it issued the current rule, the agency asserted that:

> * "The effect of cigarette smoke was even more localized to the smoker than the oil mist was to the stopper or jack leg drill. Twenty five feet upwind of the smoker, no carbon attributed to cigarette smoke was detected….Sampling twenty-five to fifty feet down wind of a worker smoking 10 cigarettes per day would add no more than 3 ug/m3 a day to the worker's exposure (PS&HTC-DD-518)….Accordingly…when MSHA collects compliance samples, miners will be requested not to smoke. If a miner does want to smoke while being sampled, and is not prohibited from doing so by the mine operator, the inspector will collect an area sample a minimum of twenty-five feet upwind or downwind of the smoker. Smokers working inside cabs will not be sampled." 66 FR 5730. The agency also noted it would not sample particular areas, occupations or persons where smoke could interfere with the result. 66 FR 5869

By contrast, after reviewing the data collected in the 31-mine study, the agency concluded that "No reasonable method of sampling was found that would effectively measure DPM levels in the presence of ETS with TC as the surrogate." (31-Mine Study,

p.74) However, the agency does not cite to any evidence in the study or elsewhere supporting this conclusion, and what data is in the record supports the current rule.

The 31 Mine Study was supposed to include an examination of this question because, as the agency described it at the time, "MSHA believes that ETS could virtually be eliminated as an interferent from the TC sample by following a smoking strategy which specified that samples be collected in areas where miners did not smoke or in areas where the smoke was diluted by ventilating air current." (31-Mine Study, p.73). The protocol for the 31 Mine Study called for NIOSH to do sampling to address this hypothesis. Specifically, "Samples … were to be taken in one of NIOSH's experimental mines without the presence of DPM to determine the smoke component of samples at varying distances from a tobacco source and under varying airflow conditions." (31-Mine Study, p.14).

There is no indication from the report on the 31-mine study that this sampling was performed. (See the discussion of the ETS issue in section V of the report.) In fact, the only data in the record about this problem is indeed a study in one of NIOSH's experimental mines (PS&HTC-DD-518), but it was conducted before the current rule was issued, not as part of the 31-mine study. Moreover, it was the data in that study which MSHA relied upon to demonstrate that the problem of interferences from tobacco smoke could be resolved in the manner the agency suggested. (66 FR 5729, 5730)

The expert on this matter, NIOSH, reached a similar conclusion. After reviewing the data from the 31-Mine study, NIOSH concluded that interferences from tobacco smoke could be controlled in the manner originally outlined by the agency in its final rule:

> "…the preference for sampling would be upstream of the smoker in the same split of air…to ensure adequate dispersion and thus dilution by prevailing ventilation, downstream sampling should be at least 5 to 10 entry widths downstream of the smoker…" (June 5, 2002 letter from Dr. Kohler, page 9).

In sum, despite its assertions, the agency has not identified any problems with using a total carbon surrogate that were not considered prior to issuing the current rule, and to date it has provided no information that would indicate the agency can accurately assess dpm concentrations by measuring elemental carbon for more than a limited period of time.

There is a suggestion in the preamble to the proposed rule that requiring a weekly check of CO emissions from diesel-powered equipment, as is currently required in the underground coal sector, could be helpful in confirming whether, with a total carbon surrogate, elevated levels of organic carbon are DPM or an interferent. (68 FR 48701) The value and utility of keeping each diesel engine in tune using a weekly CO check has been validated as a result of the mining community's experience with the underground coal diesel rule, but it is not clear how it could facilitate the implementation of a single sample compliance determination approach.

Finally, there is an alternative approach that could be used, perhaps at the option of an individual mine operator, in those mines or areas of mines in which drill oil mists or smoking could potentially cause interferences if proper sampling practices were not observed. This is the approach taken in the coal sector -- require specific controls and do not do ambient mine air compliance measurements. This approach might turn out to be feasible and economical for production stopes, for example, and provide equivalent or better protection for miners. MSHA has a legal obligation to evaluate such alternatives to ascertain if they can feasibly provide enhanced health protection for miners.

5) Operator dpm control plans.

The proposal would significantly limit the rule's requirement for individual mine control plans, both at the interim and final limits, reducing miner safety and health protection without any evidence the current requirements are not feasible for the mining industry as a whole, and despite the industry's apparent success in implementing such plans already. In fact, the evidence warrants strengthening these requirements rather than loosening them.

According to the compliance guide, the provisions of this section, which were scheduled to go into effect at the same time as the interim limit more than a year ago, are still stayed. (Compliance Guide, Q and A #9.) As explained under Heading A of these comments, MSHA's action in this regard is illegal.

The dpm rule issued in January 2001 rule required individual mine operators to establish a dpm control plan for the mine should there be any violation of the concentration limit. Such plans were to remain in effect for at least 3 years, and be the law of the mine during that time (i.e., operators can be cited for failure to follow the specific requirements of their own plans).

From the beginning of this rulemaking, the requirement for a dpm control plan upon violation has been a central component. In its 1998 proposed rule, the agency set forth the following rationale for having plans go into effect upon a violation of the rule:

> " (19) Why Do Underground Metal and Nonmetal Mine Operators Have To Have a Diesel Particulate Control Plan?
>
> Underground metal and nonmetal operators will not have to have a compliance plan if they are in compliance. Considerable time is provided under the proposed rule to come into compliance, and operators can thereafter monitor their mines to ensure they stay below the required concentration limit.
>
> But some operators may decline to take the actions necessary to achieve compliance in a timely manner, and others may need to rethink their approaches from time to time as equipment changes increase dpm concentration levels. Providing for a control plan in the event of a violation of the concentration limit ensures that there is a deliberative effort as to how to solve the dpm concentration

> problem, and that everybody understands what is going to be done to eliminate it. Accordingly, proposed § 57.5062 requires that in the event an operator is determined to have exceeded the applicable limit on diesel particulate concentration, the operator must establish a diesel particulate control plan if one is not already in effect, or modify the existing diesel particulate control plan." 63 FR 58118).

Even more detail was provided in the discussion of language of the proposed requirement (63 FR 58185), including a discussion of various elements designed to make it easier for miner operators to develop such plans and keep them up to date (e.g., no pre-approval by MSHA required; can be combined with a ventilation plan). Not many comments were received on this proposed requirement, but the agency provided an even more detailed discussion of its rationale in issuing the final rule in 2001. (66 FR 5870-5873). The agency emphasized the important role of a plan in ensuring a holistic approach to dpm control, geared to the particular circumstances of each mine. Among other points, the agency explained why the requirement for verification sampling for such plans is not duplicative of the surveys of dust, gas, mist and fumes required by the air quality rule for this sector (30 CFR §57.5002). MSHA also devoted considerable attention to explaining why multiple samples by operators are necessary to confirm continued compliance, while only a single sample is required to trigger a citation. And the agency explained in some detail why the plan, although it can be developed and modified by the operator without MSHA approval, needs to be the law of the mine so it can be enforced by MSHA, a practice identical to that used in this sector in connection with other types of plans (e.g., escape and evacuation, rock bursts, ventilation, and training).

The proposal would effectuate a number of changes:

> * Instead of being required the create a dpm control plan upon violation, an operator will only need a control plan if abatement takes more than 90 days from the date of citation;
>
> * The dpm control plan will be in effect for one year instead of three, and records would not have to be retained as long;
>
> * The operator need not verify the effectiveness of the dpm control plan through sampling;
>
> * The dpm control plan designed by the operator would not explicitly become the "law" of the mine, subject to citation by MSHA should its terms be violated (although the agency, in its preamble, explains it intends to administer the rule in this fashion nevertheless);
>
> * The dpm control plan need not include certain information currently required; and

> * The Secretary of HHS and the authorized representative of miners are not given explicit access to the control plan.

MSHA does provide an explanation for the proposed changes (68 FR 48715-48717). That explanation, however, does not discuss nor dispute the previous findings of the agency. The agency does not reference any new source of information for its change of position (other than the limited input it received in response to a new request for comments).

The agency notes that the settlement agreement required the agency to publish a notice proposing to revise this section, but did not specify how that should be done. 68 FR 48715. The agency does not offer any argument that the existing requirements have proven infeasible for the mining industry as a whole to meet. Presumably, the agency believes such findings are not required, since in its view "the proposed modifications do not compromise miner's health or safety" under the Act. 68 FR 48717. In fact, the agency notes that while it is proposing to modify the control plan, it is open to comments that the requirement of such plans are duplicative, and hence need not be retained at all. 68 FR 48716.

In making the assertion that requiring fewer mine operators to have dpm control plans does not compromise safety or health, the agency fails to explain why it made it a condition of the settlement agreement that **every** underground metal and nonmetal mine operator have a dpm compliance plan:

> "July 20, 2002–July 19, 2003—MSHA MNM compliance specialists will provide compliance assistance to underground MNM operators covered by the standard…. During this period operators shall develop and implement a suitable written compliance strategy for their mines. MSHA will retain the discretion to take appropriate enforcement actions against operators who refuse either to cooperate in good faith with MSHA's compliance assistance, or to take good faith steps to develop and implement a written compliance strategy for their mines. MSHA will provide guidance on steps an operator may take—such as sampling to determine DPM levels, developing a plan to control emissions, and ordering engineering controls—to demonstrate good faith and thereby avoid citations." 67 FR 47298.

MSHA also provided the mining community with information about the components it would look for in a written compliance strategy to demonstrate good faith compliance – one element of which was to be operator sampling.

The agency's decision to illegally suspend the implementation of 30 CFR §57.5062 requiring control plans in some circumstances, after a year of requiring all operators to have control plans, is egregious. The agency needs to provide information for the record as to whether operators failed to comply with these requirements, and hence received citations, or what specific problems if any were noted in developing such plans.

Nor does the agency dispute the safety and health benefits of the current rule outlined in the following comment to the ANPRM:

> "MSHA should not delete the requirement for a DPM control plan. In fact, nothing would do more damage to the effectiveness of the standard than deleting the need to prepare and follow a detailed control plan. Substituting the hierarchy of controls for a DPM control plan is like substituting a factsheet on geology for a map of the mine. Nor is a ventilation plan an adequate substitute for a DPM control plan, since DPM control depends on much more than ventilation. The same is true of a respiratory protection plan. No mine operator would operate without a business plan, a financial plan, a marketing plan, or a plan of operations. We find it troubling that …MSHA would consider attempting to reduce dpm exposures without a plan for doing so.
>
> "Control plans are highly cost effective in that they force mine operators to think about how to control DPM efficiently. They help MSHA determine whether the company is acting in good faith. They facilitate compliance assistance. They provide important information for the miner's representative to participate in the mine's safety and health program. (AB29-Comm-15).

In light of this comment, for example, MSHA has offered no basis for proposing to eliminate the specific requirement in the current rule that the miner's representative be notified of the plan, nor HHS; the fact that MSHA has access to the plans (68 FR 48717) is not a response. Moreover MSHA is to justify a citation for failure of an operator to comply with an element of a control plan, it is going to require something specific in the regulation and not just a policy. MSHA has offered no explanation at all suggesting that safety and health is not decreased when it has to rely on policy rather than specific rulemaking language in dealing with operator challenges.

At one point, the agency appears to assert that the proposed changes could actually improve miner safety and health because it would increase the potential for the mining community to agree on more widespread reliance upon control plans in addressing other hazards:

> " The agency is interested in developing uniform DPM control requirements that are effective for protecting miner's health and practical for the mining industry to implement." 68 FR 48716.

While the agency's interest is commendable, it has had difficulty in promulgating rules that go beyond a single hazard, and in any event the notice of this rulemaking does not contemplate such an expansion.

What the changes would do is save operators money, more than MSHA is officially projecting. Under the existing rule, MSHA assumed roughly 12 underground metal and nonmetal mines (roughly 6%) would be cited and hence require a plan. In the PREA for this proposal, MSHA assumes that 15% of underground metal and nonmetal mines would

need a plan. (PREA, p.21)While the agency is free to revise assumptions, it is not credible for MSHA to assert that several years into implementation of this rule, including an extra year of effort by MSHA to help mines get into compliance, and with individual operator economic and technological feasibility taken into account for either exemptions or extensions, twice the number of mines will receive citations for violation of either the interim or final limit, let alone citations they will not be able to abate in 90 days. In fact, since MSHA has no evidence in the record to date of any operator not being in compliance with the interim limit, it is more reasonable to assume that none will need more than 90 days to abate, and hence none will require a plan based on the interim limit. Understating projected cost savings is a way to minimize the impact of the proposal on safety and health.

The industry asserts that control plans are simply not required when the agency has a performance based standard (Watzman, D.C. hearing). In fact, however, the need for a plan for this rule has been made even more apparent by the extensive comments of industry executives themselves concerning the need to evaluate many mine-specific factors in selecting appropriate controls (see, e.g., the two NIOSH meetings concerning filter use). A plan is the well-recognized method for bridging this gap, and it is for this reason that employer safety and health plans are required by many state laws and a number of Federal standards. Instead of supporting any loosening of the requirements in the current rule, the information accumulated since the rule was promulgated in fact supports requiring all operators to have a dpm plan, whether the operator has been cited by the agency or not, and MSHA should amend the rule accordingly.

(D) Miscellaneous Matters

1) New information on health effects.

Although MSHA states it is not reopening the risk assessment, the preamble of the proposed rule contains some new exposure data, and in tabular form briefly summarizes new studies on various health effects. The conclusions from these studies are not described, nor have they been taken into account by the agency. Further, the agency encourages commenters to submit additional evidence of new scientific data related to the health risk to underground metal and nonmetal miners from exposure to DPM.

There is no legal reason why MSHA needs to collect more risk information at this time. MSHA is required by the Mine Act to ensure that the risks to miners are not increased by the proposed amendments (except where the agency specifically determines increased risk is required because a more protective approach is found to be infeasible for the industry as a whole). In comparing the risk under the existing rule to that under the proposal, the same risk assessment must be utilized so as to provide a valid comparison. The settlement agreement concerning the litigation on the metal/nonmetal dpm rule did not require MSHA to seek new data on the risks (neither exposure levels nor health effects). MSHA's independently peer reviewed risk assessment was without doubt the

most thorough every conducted by the agency, and covered all known studies identified by the agency or brought to its attention. MSHA quite properly has been implementing various provisions of the dpm standard for underground metal and nonmetal mines (as well as for underground coal mines) based on the risk assessment.

Nevertheless, the mining industry continues to assert that the agency's risk assessment was flawed, and in particular asserts that it does not provide an adequate basis for the final concentration limit (Watzman, National Mining Association, Washington, D.C. hearing on proposed rule). Some mine operators indicated during the hearings that MSHA should clarify whether or not there is in fact a risk to miners warranting a final limit of 200 micrograms of dpm per cubic meter of air. MARG coalition members cited an EPA report which seemed to reach conclusions less certain than OSHA about the carcinogenic potential of dpm, conveniently failing to note (as pointed out by a panel member at the St. Louis hearing) that the cited EPA report they cited had subsequently been supplemented by a new EPA report reaching a much more definitive conclusion about the potential carcinogenic risk of dpm.

Given the continued prevalence of these assertions, the agency should clearly restate for the mining community that it has confidence in its peer reviewed risk assessment, to summarize the conclusions in the studies that it cited in the preamble of the proposed rule (and in particular those of other government agencies like EPA), to summarize the comments of those health professionals who will be commenting on this proposed rule, and to point out that the scientific community now widely accepts the significant risk potential of dpm exposure. It is important for MSHA to emphasize to the mining community that while average underground miner exposures in this sector are declining (and would have declined further had the agency only enforced its rule in a timely manner), the median exposures remain far higher than for any other group of workers (see Table III-4, 66 FR 5571). MSHA may wish to point out to the mining community that there is no evidence that using cleaner engines will create new risks to miners (Bagley, Watts et al, "Impact of Low-Emission Diesel Engines on Underground Air Quality), and that the risks of dpm are so significant by this Administration that EPA's efforts to cut that risk are prominently displayed on EPA's home page as a current initiative, "Cleaner Diesel." MSHA should give the risk to miners the same priority focus.

Moreover, while the agency could properly exclude from the record any collateral attacks on the agency's original risk assessment (since the record is not open on the original risk assessment), in practice it should respond to such attacks by reiterating for the record the highly professional manner in which it performed the risk assessment on dpm. Such attacks began during the hearings, with some witnesses asserting that the agency's peer review did not meet certain standards (see, e.g., Sharpe, Washington, D.C.) The purpose of such attacks is to try and buttress the industry's arguments that MSHA acted arbitrarily and capriciously in setting limits on the basis of its risk assessment. The agency should not allow the industry's wild and misleading accusations to stick because of a failure to respond to them.

Finally, I direct the agency's attention to my comments below about the benefits analysis in the PREA. This analysis improperly asserts what types of agency action constitute a reduction of risk, and note the agency has failed to take account of how its actions have negatively impacted miner risk.

2. Cost and benefit analysis of the PREA

As explained under Heading C-1, because a number of assumptions in the agency's REA for the final rule have now been demonstrated by the evidence to have overstated the compliance costs to the industry, revised assumptions will need to be utilized in any new assessment of economic feasibility.

Here, I turn to other problems with the PREA published by the agency in connection with this proposed rule – e.g., new assumptions. References are to page numbers in the PREA.

It is my position that in addition to many substantive problems with the proposed rule, a number of cost assumptions in the PREA are incorrect, and hence disguise the real savings to the mining industry of the proposed changes. In addition, it is my position that the agency has improperly concluded that assisting mine operators in achieving compliance is a benefit to miners.

a) Costs

* p.15 – MSHA assumes that half of all mines would apply for a special extension to the interim limit in the first year. This seems wildly exaggerated in light of the baseline data.

* p.18 – MSHA assumes that those who would seek exemptions permitting them to use PPE are only those who would also be permitted to seek exemptions under the current rule – e.g., for miners engaged in temporary maintenance. If this were the case, there would be no need to change the language. Moreover, as explained under Heading C-2, changing the language will create a significant overhead cost to the agency and Review Commission that needs to be included in this analysis.

p.17 – MSHA asserts that mines that use respirators would only receive an average cost savings of $99 a year. It appears the basis of this estimate is the cost of plans involved, and that it does not include the savings to mine operators of not having to install expensive engineering controls. Somewhere these cost savings to the industry need to be discussed.

p.21 – MSHA utilizes its 2001 assumptions on the costs compliance plans, and then estimates the effects of the proposal by subtracting out the costs associated with sampling and plan preparation. However, it isn't clear why MSHA now assumes that half of the mines above the interim limit in the baseline sampling data (which they say is 30%) would have to establish an initial plan, absent any evidence in the preamble that all

operators won't be able to abate a citation (and/or receive an extension or exception). Here too, the actual cost savings to the industry of the proposal are much greater than indicated, and need to be shown. See the related discussion under heading C-5.

p.29 – The Paperwork Reduction Act analysis beginning on this page seems to show significant cost savings after the first year, but it isn't clear these are included in the cost/benefit analysis (e.g., savings on management plans). Also, the year by year calculations make it difficult to understand the net impact of proposal as compared to current rule, and the agency needs a summary table to be able to make this comparison.

b) Benefits

To comply with EO 12,866 and OMB guidance, the agency made its best efforts in issuing the final rule in January 2001 to provide a quantitative estimate of benefits. Just as the cost analysis should be redone to reflect new information that impacts key assumptions, so too must the benefit analysis be redone to reflect the additional information on health benefits briefly summarized, though not analyzed, in the preamble to the new proposal.

In the PREA, the agency also asserts that "the proposed rule will assist mine operators in complying with the existing final rule, thereby reducing a significant risk to underground miners." (Executive Summary; also see page 11 to the same effect). In addition to lacking any quantitative analysis supporting such a controversial statement, the agency has not provided any indication that it has in reaching its conclusion evaluated the potential impact of the proposed changes on reducing specific protections afforded miners by the current (e.g., the benefits of long-term plans with monitoring, much more limited exemptions, etc.), nor the impact on miner health of the agency's year long delay in enforcing the final limit. The agency needs to complete such an analysis to be in compliance with the requirements of EO 12,866.

3) Recommendations on additional information for the record

In making decisions on any amendments, the agency should ensure that it has the following information, and that it discusses this information in the preamble:

Were any operators in this sector cited for violations of the interim limit prior to July 19, 2003 (i.e., for failure to have a plan consistent with the agency's announced criteria for implementation of the rule during the year from July 19, 2002 to July 19, 2003)?

What has been the experience of the agency since fully implementing the interim limit on July 19, 2003 – in terms of citation, abatement, requests for exceptions or extensions and the response thereto?

Have any operators been cited for violations of maintenance, fuel, or other sections of the standard that have gone into effect?

What is the current inventory of equipment (and in particular, engines)?

At the time it issued the final rule, MSHA committed itself to continuing to work with surface mine operations to try and reduce the high exposures of some of these miners without regulatory action. 66 FR 5708. In light of the risks to such miners, the agency owes the mining community an update on its progress in this area.

The agency should ensure that the record contains notes of all ex parte communications, consistent with the guidance of the Solicitor on this matter.

Given the high professional regard in which the agency's technical experts are held by the mining community in this country and abroad, the agency should clarify for the record whether the technical staff whose signatures appear on the 31-mine study are, by virtue of those signatures, agreeing with the conclusions that accompany that study. Such a clarification would eliminate any basis for the Inspector General to investigate whether or not current agency officials engaged in an attempt to deliberately mislead the public.

(End of comments)

FINAL

September 17, 2003

Peter Galvin
9633 Parkwood Drive
Bethesda, MD 20814

Dear Mr. Galvin:

This letter is in response to your request to make an oral presentation at a Mine Safety and Health Administration rulemaking hearing on a proposed rule concerning diesel particulate matter for the metal and nonmetal sector. We have reviewed the affidavit you submitted pursuant to 29 C.F.R. §§ 2.2 and 2.3. After examining Departmental records and inquiring as to the circumstances incident to this rulemaking, we have determined that the affidavit is legally sufficient and persuasive that you gave no personal consideration to this rulemaking while you were an employee of the Department.

In accordance with the aforementioned regulations, we find that your participation in this matter is consistent with the public interest and, therefore, you are authorized to make either oral or written comments in connection with the September 23, 2003 rulemaking hearing and at such other opportunities that may occur. The Department will allow you to participate in this matter on the condition that you do not reveal internal deliberations or other nonpublic information to which you may have been privy while employed with the Department. Accordingly, your oral and written submissions in connection with this matter must comply with this condition. Please be advised that we will submit your request to participate, your affidavit, and this response for inclusion in the public record on this matter.

For your convenience, we have enclosed the earlier post employment advice you received on this matter.

If you have any additional questions, please contact Rob M. Sadler, Counsel for Ethics, at (202) 693-5528.

Sincerely,

Robert A. Shapiro
Associate Solicitor
for Legislation and Legal Counsel

Enclosure

MSHA Docket
No. AB29-COMM-27-A

From: Sadler, Robert - EBSA
Sent: Wednesday, May 28, 2003 6:42 AM
To: pd.galvin@verizon.net
Cc: Clair, Edward P - MSHA; Shapiro, Robert - SOL
Subject: Response to Inquiry

Peter:
The advice set forth below is in response to your inquiry concerning your post-employment activities in connection with contemplated activities relating to various aspects of an MSHA rulemaking, specifically:

- agency-stayed or not yet effectuated provisions of an earlier final rule;
- possible amendments to the earlier rule; and finally
- possible litigation challenging the amendments.

It is my understanding that you worked personally and substantially on the rulemaking concerning Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners, published as a final rule on January 19, 2001. The current rulemaking is focused on the appropriateness of the interim and final limits for diesel particulate in underground metal and nonmetal mines following a pending legal challenge to the standards set by the rule identified above. Further, I understand that by agreement of the parties, the litigation on the original rulemaking has been stayed. You have informed me that you were not personally and substantially involved in that litigation.

Generally, the post employment restrictions imposed by 18 USC 207, and the regulations at 5 CFR Part 2637, permanently prohibit communications knowingly made to the Government with the intent to influence by former employees on behalf of a third party with respect to particular matters involving a specific party or parties on which the employee worked personally and substantially while with the government. 18 USC 207(a)(1); 5 CFR 2637.201. In addition, you are prohibited for a period of two years following your last activity from knowingly making communications to the Government with respect to matters that were under your official responsibility during your last year of Government service. 18 USC 207(a)(2); 5 CFR 2637.202. Also, any confidential or protected information to which you were privy because of your responsibilities, remains protected and should not be revealed in the course of your activities.

For purposes of the post-employment law, the restrictions apply only to particular matters involving a specific party or parties. Such matters include judicial or other proceedings, applications, requests for a ruling or other determination, contracts, claims, controversies, investigations, charges, accusations, arrests, or other particular matters involving a specific party or parties in which the United States is a party or has a direct and substantial interest. 5 CFR 2637.201(c)(1). The regulations further note that such matters typically involve "a specific proceeding affecting the legal rights of the parties or an isolatable transaction or related set of transactions between identifiable parties." Id. The regulation then further defines "particular matter," stating that "[r]ulemaking, legislation, the formulation of general policy, standards or objectives, or other action of general application is not such a matter." Id. (emphasis added).

Moreover, the requirement that the particular matter at issue be a "'particular matter involving a specific party' applies both at the time that the Government employee acts in an official capacity and at the time in question after Government service." and the same particular matter must be involved. 5 CFR 2637.201(c)(4). Office of Government Ethics guidance, issued February 17, 2000, notes that the parties involved in the post-employment communication may be different than those that were involved with the matter at the time of the employee's participation. OGE Guidance at 4. However, the guidance further clarifies that "[g]enerally rulemakings do not usually involve specific parties. As

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an example, the guidance notes that "[c]onsequently, it is quite possible that an employee who participated in a rulemaking while employed by the Government will, after leaving Government service, be able to appear before his former agency concerning the application of that rule to his new private sector employer without violating the lifetime restriction." Id.

In light of the above, answers to your specific questions are set forth below:
1) If public comments are solicited, may I submit comments on my own behalf?
Yes -- even if we were to determine that the new rulemaking was the same particular matter as the one on which you had previously worked, the provisions above do not prohibit a former employee from representing himself before his former agency or any arm of the United States Government.

May I submit comments jointly with others?
Yes -- because a "rulemaking" is generally not a particular matter involving specific parties at the time it is being formulated or even promulgated as a final rule, you may make comments jointly with others made on behalf of the group.

May I submit comments on behalf of an organization as their representative?
Yes -- because a "rulemaking" is generally not a particular matter involving specific parties at the time it is being formulated or even promulgated as a final rule, you may make comments on behalf of third parties as their representative.

2) If hearings are held, may I appear and provide comments on my own behalf?
Yes -- you may appear at hearings concerning the rulemaking and make self representations for the same reasons as set forth above.

May I appear with others?
Yes -- see answer to question 1 above.
May I appear on behalf of others as their representative?
Yes -- see answer to question 1 above.
3) If there is litigation about the rulemaking (I'm talking about APA challenges only at this point, not enforcement actions that might ensue) may I participate in negotiations if invited to represent one of the parties?

Yes. While, as noted above, rulemaking is not generally a particular matter for purposes of the post employment laws, litigation concerning the rulemaking may be a particular matter and subject to the post employment restrictions. Although the agency is now engaged in rulemaking (possible amendments to the earlier rule), no litigation has as yet been brought. Therefore, because any future litigation concerning the new rulemaking activity was not a particular matter at the time you were employed and thus would be a new matter, you may participate in negotiations if invited to represent one of the parties.

In addition, with respect to the earlier litigation involving the underlying rulemaking, because you were not personally and substantially involved in that earlier (and now stayed) litigation, you may become involved in that litigation as well, either behind the scenes or in a representative capacity.

May I participate in oral arguments as the representative of a party?
Yes.
May I sign my name to a brief as a representative of one of the parties?
Yes.
May I help one of the parties prepare arguments or briefs in a non-representative capacity?
Yes. The post-employment restrictions do not prohibit behind-the-scenes activities.
May I participate in an amicus capacity representing only myself?
Yes. The post-employment restrictions do not prohibit a former employee from representing himself before his former agency or any arm of the United States Government.

4) Are there any other restrictions on my involvement of which I should be aware?

Yes, aside from the post employment laws addressed above, a DOL specific regulation states that: No person who has been an employee of the Department and attached to the Washington office of any bureau, board, division, or other agency thereof, shall be permitted to appear, or act as an attorney, agent or representative before the Department or any branch or agent thereof, in connection with any case or administrative proceeding pending before such bureau, board, division, or other agency during the time of his employment with the Department, unless he shall first obtain the written consent thereto of the Secretary of Labor or his duly authorized representative. 29 CFR 2.2.

Should you contemplate activity contemplated by the above rule concerning any "case or administrative proceeding" that was pending before the Department during your tenure with the Government, you would need to obtain the written consent of the Secretary of Labor pursuant to 29 CFR 2.2 and 2.3 (content and form of application for Secretary's consent). We read the DOL rule as an additional appearance restriction and, notwithstanding the character of a rulemaking under the post-employment regulations, you would need to apply and obtain the consent of the Secretary to appear before the Department. This requires that you file an affidavit identifying the matter at issue and attest that you gave "no personal consideration to such matter while he was an employee of the Department." The application "will be denied if the statements contained therein are disproved by an examination of the files, records, and circumstances relating to the matter, or if, in the opinion of the Secretary or his duly authorized representative, the public interest so requires." 29 CFR 2.3. Consent may be granted in circumstances where "the Secretary or his duly authorized representative is satisfied that the applicant gave no personal consideration to the matter in question . . . and if he is satisfied that it is lawful and consistent with the public interest to do so . . . ." Id. Obviously, this requirement would not apply to the litigation concerning the initial underlying rule, but would, for example, apply to any appearances before the Department in connection with the current rulemaking action.

In addition, because the foregoing advice is limited to Federal laws and regulations, we also would encourage you to contact bar counsel for advice, in particular concerning professional conduct rules applicable to switching sides and preserving client confidences.

Please contact me if you have any additional questions.

Rob
Rob M. Sadler
Counsel for Ethics
Office of the Solicitor
U.S. Department of Labor
(202) 693-5528

-----Original Message-----
From: Galvin Peter
Sent: Thursday, April 10, 2003 3:44 PM
To: Clair Edward P.-MSHA
Cc: Shapiro Robert; Sadler Robert
Subject: RE: Ethics inquiry

Actually, I'm not sure if the distinction you mentioned applies, Ed. In fact, I have discovered that in a world full of coincidences, the proposed new OGE rules on exactly this point use an example of a former MSHA employee to illustrate that matters of general applicability, like a rulemaking applicable to the general public, is not even covered. (see proposed 2641.201(h)(2)). I gather that if I had been involved in the litigation it would be a different story, but of course I was gone long before that started.

Rob, will there be any difficulty getting an opinion on this before I leave? If I'm not a priority for your huge staff (sigh), please let me know how I can proceed in the absence of a ruling.

-----Original Message-----

From: Clair-Edward@MSHA.gov [<mailto:Clair-Edward@MSHA.gov>]
Sent: Friday, April 04, 2003 2:00 PM
To: galvin-peter@dol.gov
Cc: shapiro-robert@dol.gov; sadler-robert@dol.gov
Subject: RE: Ethics inquiry

Peter and Bob,
I've cc'd Rob Sadler because a close but different question involving Celeste Monforten and MSHA's proposed dust rules was referred to Rob earlier this week.

I would welcome Pete's contribution in whatever capacity, but I can see that there is a serious legal question invoved. It seems to me that a threshold question is whether the current rulemaking is the same "particular matter" that Pete was so intimately involved in a few years ago. It strikes me that it is, although I could make an argument that it is not. The current rulemaking is focused on the appropriateness of the interim and final limits for diesel particulate in underground metal and non-metal mines following a pending legal challenge to the standards set by "Pete's Rule." I'd be happy to discuss this anytime you would like.

Ed
-----Original Message-----
From: Galvin Peter [<mailto:galvin-peter@dol.gov>]
Sent: Friday, April 04, 2003 01:25 PM
To: Shapiro Robert
Cc: Clair Edward P.-MSHA
Subject: Ethics inquiry

Bob, when I retire at the end of this month, I was expecting to sit back and watch the grass grow for a while. And I hope that will be the case, as I have a long list of chores to do. But I was recently reminded that diesel rulemaking is again underway at MSHA, and in case I cannot resist the temptation to get involved, or should I get asked to get involved, I thought I should check on the appropriate ethics rules that might be applicable. I'm copying Ed because I know he'll want to be sure I've checked with you.

By way of background, it may be relevant to remind you that I had a major management role in that rulemaking for a few years. Also, the rulemaking in which I participated is completed and the rule is in place. However, various provisions of the rule have not yet taken effect -- some because the rule itself set future effective dates, and others because the agency stayed them. I gather the agency plans to propose some amendments to the original rule before some of the delayed and/or stayed provisions take effect. Moreover, litigation on the original rulemaking has been stayed, pending resolution of these outstanding matters, by agreement of the parties. (If further factual clarification of the status of the rulemaking is required for you to opine on this matter, it may be necessary to check with Ed.)

Here are some of the questions that occur to me --
1) If public comments are solicited, may I submit comments on my own behalf? May I submit comments jointly with others? May I submit comments on behalf of an organization as their representative?

2) If hearings are held, may I appear and provide comments on my own behalf? May I appear with others? May I appear on behalf of others as their representative?

3) If there is litigation about the rulemaking (I'm talking about APA challenges only at this point, not enforcement actions that might ensue) may I participate in negotiations if invited to represent one of the parties? May I participate in oral arguments as the representative of a party? May I sign my name to a brief as a representative of one of the parties? May I help one of the parties prepare arguments or briefs in a non-representative capacity? May I participate in an amicus capacity representing only myself?

4) Are there any other restrictions on my involvement of which I should be aware?
Please try and get back to me by the end of the month at the latest. Thanks

9633 Parkwood Drive
Bethesda, Md. 20814
June 3, 2003

Dr. John D. Graham, Director
Office of Information & Regulatory Affairs
Office of Management and Budget
725 17th Street, NW
Washington, DC 20503

by telefax: 202-395-3047, and by mail

Dear Mr. Graham:

The Mine Safety and Health Administration (MSHA) is in the process of fulfilling a settlement agreement under which the agency agreed to propose certain amendments to the its 2001 rule protecting underground metal and nonmetal miners from the hazards of exposure to diesel particulate matter (dpm). Your office will soon be reviewing this proposal.

While the public will have an opportunity to comment on this proposal, there are several matters of which your office should be cognizant in conducting your pre-publication review.

1) Implementation of the existing rule has been postponed by the agency for a full year on the basis of a weak legal justification without any precedent. I refer you to the comments on this point from the legal scholars of the Center for Progressive Regulation, a copy of which is enclosed. Should MSHA propose to further delay the implementation of all provisions of the existing rule, I would strongly encourage you to ask the Office of Legal Counsel at the Department of Justice to opine on the matter prior to lending the Administration's support to such a proposal.

2) MSHA's independently peer-reviewed risk assessment performed in connection with the underlying rule concluded that at dpm levels which have been observed in underground mines, many miners are at significant risk of incurring several material impairments over a working lifetime of occupational exposure to dpm. Among those material impairments is lung cancer. Since MSHA completed its risk assessment, others (including EPA) have reached similar conclusions about the risk of cancer posed by dpm, and accordingly this Administration has shown its strong support for controls to limit dpm emissions and exposure. MSHA's current rule provides a hierarchy of controls appropriate for dealing with a hazard that presents a cancer risk, and these should not be altered. Thus, for example, any proposal to permit the rotation of workers as a method of limiting dpm exposure, which would permit more workers to be exposed to this risk, should be rejected as inconsistent with the agency's risk assessment.

3) In determining the appropriate requirements to limit the dpm exposure of underground metal and nonmetal miners, MSHA relied upon an extensive record about the technological and economic feasibility of controls. A very detailed discussion of all the information the agency had available was included in the preamble of the final rule. Subsequently, the agency's expert technical staff has conducted study of feasible controls in a range of underground metal and nonmetal mines. MSHA relied upon a similarly extensive record with respect to the complex question of accurately measuring dpm concentrations in underground mining environments, and here to the agency's expert technical staff has gathered additional information. As you know, one of the great strengths of MSHA is the expertise of its technical staff, and accordingly their new findings and conclusions about control feasibility and measurement approaches warrant careful attention. For example, should the expert findings continue to support the conclusions in the original rule that engineering controls are technologically and economically feasible for various mining operations, there would be little reason to consider amendments to the rule allowing mine operators to substitute personal protective equipment for more protective engineering controls. Unfortunately, however, your staff may encounter some problems in identifying the findings and conclusions of the expert staff because I understand that subsequent to the completion of their research, additional summaries and conclusions may have been melded into their reports in a manner which does not clearly distinguish between the conclusions of the experts and the conclusions of others. As this could inadvertently prejudice your review, and that of the public, I would encourage you to seek assurances from MSHA that the record makes the necessary distinctions in this regard, and that decision-making proceed with appropriate weight given to the expert evidence.

I hope these brief comments will enhance your review of this matter.

Sincerely yours,

Peter D. Galvin

Enclosure

Center for Progressive Regulation

FILED BY ELECTRONIC MAIL

November __, 2002
Mine Safety and Health Administration
Office of Standards, Regulations and Variances
Room 2352
1100 Wilson Boulevard
Arlington, VA 22209-3939

Re: Comments on Diesel Particulate Matter Exposure of Underground Metal and Nonmetal Miners, Advance Notice of Proposed Rulemaking, 67 Fed. Reg. 60199 (2002).

Dear Sir/Madam:

These comments are submitted by the Center for Progressive Regulation (CPR or the Center), a newly created organization of academics specializing in the legal, economic, and scientific issues that surround health, safety, and environmental regulation. CPR's mission is to advance the public's understanding of the issues addressed by the country's health, safety and environmental laws and to make the nation's response to health, safety, and environmental threats as effective as possible.

The Center is committed to developing and sharing knowledge and information, with the ultimate aim of preserving the fundamental value of the life and health of human beings and the natural environment. One component of the Center's mission is to circulate academic papers, studies, and other analyses that promote public policy based on the multiple social values that motivated the enactment of our nation's health, safety and environmental laws. The Center seeks to inform the public about scholarship that envisions government as an arena where members of society choose and preserve their collective values. We reject the idea that government's only function is to increase the economic efficiency of private markets.

The Center also seeks to provoke debate on how the government's authority and resources may best be used to preserve collective values and to hold accountable those who ignore or trivialize them. The Center seeks to inform the public about ideas to expand and strengthen public decision-making by facilitating the participation of groups representing the public interest that must struggle with limited information and access to technical expertise.

On September 25, 2002, the Mine Safety and Health Administration (MSHA) published an Advance Notice of Proposed Rulemaking in which it proposed to implement the terms of a settlement that the agency had reached with representatives of some of the mining companies that were subject to the agency's recently promulgated Diesel

Particulates Rule. 67 Fed. Reg. 60199 (2002). The regulation was promulgated pursuant to the Mine Safety and Health Act of 1977 to protect miners from the clearly documented health hazards of exhaust from diesel engines running in the close quarters of an underground mine. After years of compiling information and soliciting and considering public comment, the agency published the final Diesel Particulates Rule on January 18, 2001. 66 Fed. Reg. 5706 (2001). The promulgation of this regulation for the first time offered workers relief from the exceedingly large and varied health risks posed by diesel exhaust in mines.

The agency has now proposed to amend the Diesel Particulates Rule by postponing the effective date until July 19, 2003 and by changing the substance in accordance with a settlement negotiated between representatives of several regulated companies and representatives of the Bush Administration. This clearly unlawful action is an affront to the workers who depend upon MSHA for protection against the exceedingly high health risks that they face on a day-to-day basis in one of the most dangerous workplaces in the country.

In postponing the effective date of the Diesel Particulates rule to allow the agency time to amend it to decrease its stringency is a transparent attempt to avoid section 101(a)(9) of the Federal Mine Safety & Health Act, which explicitly provides that "[n]o mandatory health or safety standard promulgated under this title shall reduce the protections afforded miners by an existing mandatory health or safety standard." The purpose of this provision is to prevent precisely what the agency is attempting to accomplish through the implementation of the settlement agreement with the regulatees in this proceeding. Many of the workers who will suffer from the postponement and evisceration of this rule do not belong to any labor organization and therefore depend upon MSHA to protect them from workplace hazards. By capitulating to the demands of a few mining companies that it gut the existing Diesel Particulate Rule, the agency is shirking its statutory duty to protect workers who are helpless to protect themselves.

I. General unlawfulness of suspending the effective date of a final rule without notice and comment.

The effective date of a final rule is a substantive aspect of the rule that becomes law on the date that the rule is promulgated. The effective date can, of course, be changed, but that change can only come about through the same notice-and-comment procedures that the agency employed in promulgating the rule in the first instance. See Peter D. Holmes, *Paradise Postponed: Suspensions of Agency Rules*, 65 N.C.. L. Rev. 645, 653 (1987).

In *Natural Resources Defense Council v. EPA*, 683 F.2d 752 (3d. Cir. 1982) the EPA indefinitely postponed final regulatory amendments that had been published, but were not yet in effect. After the plaintiffs filed suit against the agency for not providing notice and comment as required under the APA, the EPA terminated the indefinite

postponement of the amendments and made them prospectively effective. The agency simultaneously proposed to further suspend the effective date and invited comment on that proposal. Thus, the agency "treated the *further* postponement of the amendments as a rule subject to the rulemaking provisions of the APA, despite the fact that it did not treat the *initial* postponement as a rule." 683 F.2d at 757. Several months later, the EPA effectuated its previous prospective effective dates for some of the amendments, but indefinitely postponed four "highly controversial" amendments. Id. at 757-58. The court found that the agency, without notice and comment, had

> abrogated rules which had been proposed, which had undergone years of notice and comment procedures, and which had been promulgated, with an effective date, in final form. By postponing the effective date of the amendments, EPA reversed its course of action up to the postponement. That reversal itself constitutes a danger signal. Where the reversal was accomplished without notice and an opportunity for comment, and without any statement by EPA on the impact of that postponement . . . the reviewing court must scrutinize that action all the more closely to ensure that the APA was not violated.

Id. at 760-61. The court held that the postponement did in fact violate the Administrative Procedure Act.

The court held that the indefinite postponement of the amendment's effective date was a "rule" within the meaning of the APA. The court reasoned that the effective date is a substantive component and essential element of the rule itself: "without an effective date a rule would be a nullity because it would never require adherence." Id. at 762. Holding otherwise would permit "an agency [to] guide a future rule through the rulemaking process, promulgate a final rule, and then effectively repeal it, simply by indefinitely postponing its operative date." Id. Since the repeal of a rule is subject to rulemaking under the APA, the court reasoned, so should the postponement of the effective date.

In *Environmental Defense Fund, Inc. v. Gorsuch*, 713 F.2d 802 (D.C. Cir. 1983), EPA promulgated standards pursuant to the Resource Conservation and Recovery Act (RCRA) in January 1981 with an effective date of July 1981. A few days after the effective date of the regulation, the EPA published a notice in the Federal Register proposing to withdraw or suspend the regulations and proposing not to require the submission of at-issue permit applications from industry. Id. at 808. Approximately five months later, EPA published its proposed rule to suspend the effective dates for the regulations, and announced a new interim policy that it would not call in permit applications required under the regulations. The agency reasoned that it would not be a prudent allocation of resources to begin processing permits under regulatory standards which might be suspended in the near future. The court held that this, too, violated the Administrative Procedure Act.

Although the agency's refusal to call in permit applications was technically not a suspension of previously promulgated regulations, the court recognized that "the effect was exactly that." Id. at 818. Hence, the agency's action "was in substance the promulgation of a regulation." Id. Accordingly, the agency's decision to forego notice

and comment violated the APA. See also *Environmental Defense Fund, Inc. v. Environmental Protection Agency*, 716 F.2d 915 (D.C. Cir. 1983).

Even the Department of Justice, in a February 1981 opinion on the subject justifying suspensions of very limited duration, noted that a decision to proceed with further rulemaking was tantamount to an admission that the delay would be so substantial as to undermine the justification for a suspension: "…once a decision to begin the process of amending a rule is made, there is no longer a plausible argument that a rule was to take effect is merely to be delayed for a brief period." (5 U.S. Op. Off. Legal Counsel 59, 66.).

II. The applicability of 5 U.S.C. § 705 to the stay of the effective date of "certain provisions" of the MSHA Diesel Particulate Rule.

MSHA apparently does not contest the proposition that the postponement of the effective date of a regulation must be accomplished through notice-and-comment rulemaking. Thus, the agency does not claim that its action postponing the effective date for "certain portions" of the Diesel Particulate Rule comes within one of the exceptions to notice-and-comment rulemaking procedures set out in 5 U.S.C. § 553(b). Instead, the agency relies on the fact that it was long ago sued by companies challenging the substance of the rule in various courts of appeals. first sentence of 5 U.S.C. 705 that reads:

> "When an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review. On such conditions as may be required and to the extent necessary to prevent irreparable injury, the reviewing court, including the court to which a case may be taken on appeal from or on application for certiorari or other writ to a reviewing court, may issue all necessary and appropriate process to postpone the effective date of an agency action or to preserve status or rights pending conclusion of the review proceedings."

The purpose of the first sentence of section 705 is to allow an agency, in fairness to a party seeking to challenge agency action, to postpone the effective date of agency action in situations in which compliance with the rule would effectively preclude the right to appeal. For example, if compliance with the rule required a regulatee to make large and irreversible capital investments and if the penalties for failure to comply were high, the only effective option available to a regulatee would be to comply with the rule. The looming effective date would effectively preclude judicial review because the regulatee could not afford to risk the possibility that judicial review would not be completed prior to the effective date. In such cases, section 705 invites agencies to postpone effective dates pending judicial review.

MSHA's July 18, 2002 postponement of the effective date of its Diesel Particulates Rule, however, does not come within section 705 for several reasons. First, the parties challenging the Rule could easily have secured judicial review by now if they had expeditiously pressed their appeals. All three lawsuits described in the July 18, 2002 notice staying the effective date of the regulations were filed in the first three months of 2001. More than enough time has elapsed since the filing of those suits for a successful completion of the litigation. If the only reason for the stay was to provide the regulated entities a fair opportunity to litigate their challenge in a court of appeals, that rationale cannot possibly support an extension of the effective date of the regulations until July 19, 2003. Yet the July 18, 2002 "stay of effectiveness" does precisely that.

More importantly, the rationale that the agency has provided for the postponement does not come within the terms of section 705. That section permits an agency to stay the effective date of a rule for the narrow and limited purpose of permitting the expeditious completion of a petition in a court to review the agency action. The rationale that MSHA offered for the postponement was "to prevent confusion while MSHA carries out" an enforcement policy that resulted from "the parties' settlement negotiations." 67 Fed. Reg. at 47299. In the September 25, 2002 ANPRM, MSHA further explained that it was "staying the effectiveness of the following provisions pending completion of further rulemaking to address" certain issues. 67 Fed. Reg. at 60200. Neither of these reasons has anything whatsoever to do with the expeditious completion of judicial review.

It is perfectly clear from the agency's explanations that the real purpose of the stay is to allow the agency an opportunity to amend the existing duly promulgated rule before the regulatees are required to comply with that legally binding rule. This is precisely what the courts in *Environmental Defense Fund, Inc. v. Gorsuch*, 713 F.2d 802 (D.C. Cir. 1983) and *Natural Resources Defense Council v. EPA*, 683 F.2d 752 (3d. Cir. 1982) said agencies cannot accomplish without notice and comment rulemaking. In an unpublished opinion addressing a similar situation in which EPA sought to use section 705 to facilitate the repeal of an existing rule, the D.C. Circuit warned that section 705 "permits an agency to postpone the effective date of a not yet effective rule, pending judicial review. It does not permit the agency to suspend without notice and comment a promulgated rule." The court noted that "If the agency determines the rule is invalid, it may be able to take advantage of the good cause exception, 5 U.S.C. § 553(b)." *Safety-Clean Corp. v. EPA*, 1996 U.S. App. LEXIS 2324 (D.C. Cir. 1996).

MSHA has not proposed to postpone the effective date of the Diesel Particulates Rule and it has not elicited public comment on that action. Until it does so, the rule as promulgated on January 19, 2001 remains in effect, except insofar as it was amended by the notice-and-comment rulemaking completed on February 27, 2002. 67 Fed. Reg. 9180 (2002). If the agency has concluded that the rule that it promulgated almost two years ago is no longer valid, then it may repeal that rule or it may amend or revise that rule, but it must accomplish such action through notice-and-comment rulemaking.

Finally, even if the agency decides to use notice-and-comment procedures to consider promulgating a rule postponing the effective date of the Diesel Particulates

Rule, it should decline to do so on the merits. In considering a petition for a judicial stay under 5 U.S.C. § 705, the courts apply the same test that they apply in considering a motion for a temporary injunction. See *Cronin v. USDA*, 919 F.2d 439, 446 (7th Cir. 1990); *Ohio v. Nuclear Regulatory Commission*, 812 F.2d 288, 290 (6th Cir. 1987); *Branstad v. Glickman*, 118 F. Supp. 2d 925 (N.D. Iowa 2000). Although there are no decided cases on the considerations that apply to an agency in postponing an effective date under section 705, the same considerations that guide the courts should guide the agency. Thus, in considering a petition for a postponement of an effective date of a rule under section 705, MSHA should answer the following questions:

> (1) Has the party requesting the stay made a strong showing that it is likely to prevail on the merits of the litigation? (2) Has the petitioner shown that without such relief, it will be irreparably harmed? (3) Would the issuance of a stay substantially harm others, in particular those who are not parties to the litigation? (4) Where does the public interest lie?

In the case of the Diesel particulate rule, the petitioners have not demonstrated how the agency should answer any of these questions.

In particular, the risk assessment that MSHA prepared to accompany the rule strongly suggests that the answer to the third question is clearly "Yes." That risk assessment explicitly described the significant risk of material impairment of health to miners exposed to the dpm levels currently found in U.S. mines. The estimates of risk are staggering. A suggestion that miners will not be adversely affected directly contradicts the findings in MSHA's quantitative risk assessment. The risk assessment explores a full range of health effects related to dpm exposure including: bronchitis, eye and throat irritation, nausea, headaches, diminished pulmonary function, cardiovascular and cardiopulmonary disease and lung cancer. If dpm exposure limits are allowed to exceed 400 ug/m^3 for at least one additional year, miners will clearly be adversely affected.

Rather than acquiescing in the complaints of the mining industry that protecting workers from the clearly documented adverse effects of exposure to diesel emissions in mines, the Mine Safety and Health Administration should be enforcing the rules that it promulgated almost two years ago. If some companies believe that protecting the health of their workers is too expensive, they can make that case in a petition to amend the rules after they have had a chance to work in the real world.

Sincerely,

Thomas McGarity, President
Center for Progressive Regulation,
W. James Kronzer Chair in Law
University of Texas Law School

Member Scholars:

Frank Ackerman, Ph.D

Director, Research & Policy Program
Global Development & Environment Institute
Tufts University

John Applegate,
Walter W. Foskett Professor of Law
Indiana University School of Law -- Bloomington

William Buzbee,
Professor
Emory University School of Law

Sheila Foster,
Professor
Fordham Law School

Eileen Gauna,
Professor
Southwestern University School of Law

Rob Glicksman,
Robert W. Wagstaff Professor of Law
University of Kansas Law School

Lisa Heinzerling,
Professor
Georgetown University Law Center

Thomas McGarity,
W. James Kronzer Chair in Law
University of Texas Law School

Clifford Rechtschaffen,
Professor and Co-director, Environmental Law and Justice Clinic
Golden Gate University School of Law

Christopher Schroeder,
Charles S. Murphy Professor of Law & Public Policy Studies,
Director of the Program in Public Law
Duke University School of Law

Sidney Shapiro,
John M. Rounds Professor of Law
University of Kansas Law School

Rena Steinzor

Professor and Director of the Environmental Law Clinic
University of Maryland School of Law

David Vladeck,
Associate Professor, Institute for Public Interest Representation
Georgetown University Law Center